THE FARMERS' CABINET,

DEVOTED TO AGRICULTURE, HORTICULTURE, AND RURAL ECONOMY.

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For the Farmers' Cabinet.

LIME.---No. III.

In a former communication on the subject of the agency and importance of the different earths in the formation of soils, best calculated to produce vegetation in the highest state of perfection, I took occasion to remark that lime (calcareous earth) merited a more particular notice. Its important uses in agriculture and the arts, certainly entitle it to more consideration than any other substance belonging to the mineral kingdom. With a desire, therefore, to invite the philosophic and inquisitive mind into further investigations, it may be proper on this occasion to notice a brief outline of its natural history, and the effects of the various processes necessary preparatory to its usefulness and application in agriculture and the arts.

Lime, in the mineralized state, is usually found in the earth either in the form of carbonate or sulphate. The former consisting of lime and carbonic acid, commonly called limestone or carbonate of lime. The latter of lime, sulphuric acid, and water, called plaster of paris, gypsum or sulphate of lime.—Limestone frequently contains a portion of silicious, aluminous, and magnesian earths, with metallic oxides. In the purest state that it has probably ever been found, it contains about 57 per cent. of lime; the other 43 parts consists principally of carbonic acid.* Lime, in the most refined state that it has ever been obtained by art, appears to possess all the distinct characters of metals; consequently, it is considered a simple metallic substance, which has been distinguished by the term *calcium*, which name will be hereafter used in the further consideration of the subject.

Calcium unites with oxygen gas with avidity, forming an oxide of calcium (quick lime) similar in every respect to fresh burnt lime. In the process of burning, the carbonic acid is expelled, and although about 43 per cent. of the original weight may be lost by the operation, the masses retain their form before burning; the particles being firmly united by their attraction of aggregation. The oxide of calcium possesses a strong affinity for water; their union is formed with such avidity, that by the rapid condensation of the water in its passage from the fluid to the solid state, much heat is evolved, and a new compound, the hydrate of calcium is the result. The attraction existing between the particles of the oxide of calcium is destroyed by the change.—A complete disintegeration takes place, and the whole falls into a state of impalpable powder (slacked lime.) We have now a hydrate of calcium possessing a strong affinity for carbonic acid, with which a new compound is formed, the water of the hydrate is set at liberty, and a carbonate of calcium, such as existed before the calcination, is the result. Hence it appears that nothing has been obtained other than that of reducing the carbonate of calcium to a complete disintegeration, which could not have been accomplished by grinding. This state of pulverization is, however, of much importance: each particle being rendered distinct and separate, the increasing union with carbonic acid will continue until it arrives at the state of super-carbonate, thereby very much increasing its solubility in water, which seems to be necessary to prepare it to produce its most important effects in agriculture. Having attempted a brief outline of some of the characters of such

*As this substance is of vast importance in agriculture, particular attention will be devoted to its constituents and properties in the consideration of the food of plants.

earths as are considered essential in the formation of a soil capable of producing vegetation, namely, silicious, aluminous and calcareous, which, properly combined with vegetable mould or putrescent matter, becomes highly productive. Joseph Cloud.

A New Corn Drill.

We take great pleasure in laying the following letter from our old and valued friend, Dr. Michener, before the readers of the Farmers' Cabinet. It was addressed to the Philadelphia Society for Promoting Agriculture, and is published at the request of the Committee of Publication, of said Society. The model of the drill referred to may be examined at the office of the Cabinet.

To the Phila. Society for Promoting Agriculture:

Through the kindness of friends who are entirely unknown to me, you have elected me an Honorary Member. If my *capacity* was in any degree equal to my *inclination* to promote the objects of your association, I should not be unworthy of the honorable testimony which you have borne to it. Although in a measure estranged from agricultural pursuits by professional duty, they are my delight, and —if I were permitted fairly to engage in them —would afford me more satisfaction than any other employment. It is with considerable hesitation that I submit to your consideration the following remarks, with an accompanying model of a corn drill.

About fifteen years ago, I made a temporary drill for the purpose of a small experiment, but did not pursue the subject further until the last winter. At the time last mentioned I constructed a more permanent instrument, with which we have planted about twelve acres of corn to good satisfaction.

The model embraces such improvements as the trial suggested.

I have reduced it to one-fourth of the dimensions—the proportions being pretty accurately observed.

When the ground has been properly prepared, and is in good working condition, the requisite indications for a good corn drill are supposed to be the following:

1. It should be cheap and of simple construction.

2. It should be adapted to the draught of one horse, and of easy management by the man who drives.

3. It should make a straight, uniform furrow of any required depth.

4. It should drop the grains singly at any required distance, and in a straight line.

5. It should cover the corn smoothly at any required depth, and press the earth down upon it.

All this should be performed at one operation. The drill which I have the pleasure of exhibiting is the result of an attempt to meet these indications. How far I have succeeded can only be determined by further trial. Experience can best discover its imperfections, and suggest the proper means of removing them.

The drill is worked by a man and horse, with the same facility as a plough or cultivator. The depth of the furrow is regulated by the rollers, and can be varied at pleasure by raising and depressing the fore one.—The depth of the covering is governed by that of the furrow, and must be uniformly the same. The intervening distance between the grains will be determined by the size of the hind roller—the number of notches in the cylinder and the proportionate size of the whorls on which the band plays. The tooth being narrow, and the grain falling between its wings before the displaced earth can fill up the furrow, it falls in a direct line and is certainly covered—the covering being completed by the spike tooth which follows. If it should be found necessary, the latter tooth can have a wing attached, so as to throw more earth on the corn. The hind wheel rolls the earth sufficiently on the grain. But the great obstacle to the proper construction and working of the corn drill arises from the various size and irregular shape of the grains. They occupy very different spaces in the notch when placed on the side—the edge—or the end.—This circumstance must always render the delivery of the corn more or less irregular and uncertain. When the notch is made so as to admit a grain in its broadest dimensions, it will unavoidably allow two or three to enter edge-wise. It is believed that the present plan of a drill-box, with two apartments communicating through a sliding door, will greatly assist the process. By this arrangement the cylinder is relieved from the incumbent weight of the corn in the box, and as only a few loose grains are at any time allowed to float upon its surface, they can the more readily arrange themselves in the notches. In turning at the ends of the field, the handles may be so elevated as to raise the hind roller off the ground, and thus stop the drill, and prevent the grain from being scattered where it is not required. A particular description is unnecessary.

Drill husbandry is by no means adapted to every situation; and always requires a due preparation of the soil before it can be practised with advantage. Land which abounds with stumps or large stones, or is broken into steep declivities, is by no means suitable for the drill. The judicious farmer will only em-

ploy it when the ground is properly prepared for its use. When this is done, it is believed that the following advantages will be derived from its application to the corn crop.

1. *Considerable economy in the labor of planting.* The whole process will be performed with the same team and labor, and in the same time as would be required to furrow out the ground in one direction in the usual way. The dropping and hoeing would be saved. On large estates, and where despatch is required, this would be an important item. On the contrary, it is objected that as much additional labor would be required in preparing the ground for the drill as would be saved in planting with it. But ground properly prepared for ordinary planting will answer for the drill without additional labor. Besides, if the ground is not prepared before planting, it must be done after, and with greater labor and expense.—The farmer should always look to the increase of his crop to compensate him for good husbandry.

2. *Greater certainty that the corn will vegetate.* In the ordinary method, the furrow sometimes becomes quite dry before it can be planted by the tardy process of hand labor, and if rain does not speedily follow, the seed will suffer from want of moisture. Either it will not vegetate—or merely sprout and then perish. In 1836, many fields of corn were greatly injured in this way. The drill always plants the corn in fresh earth, when it is immediately covered in a way to receive moisture.

3. *An increase of the crop.*—This is the great object which every farmer should seek to attain, and is the primary advantage afforded by the corn drill. There can be no doubt of the greater vigor and productiveness of corn when the stalks stand separate, than when growing in hills of three or four together. Common sense, apart from all observation, must teach us that several plants cannot grow together without sustaining a mutual injury. And so does experience. Place a dozen grains together, and they will produce weak and slender stalks with little or no grain. Diminish the number, and the growth and produce will increase in the same or a greater ratio till you arrive at the maximum of both from a single grain. I am aware that some intelligent and observing farmers deny this, and say that two stalks together grow better, and produce more than when separate. It appears to me that they have made their observations in the wrong field. When corn is planted in hills an insect may destroy a whole hill except one stalk, and it is easy to perceive how the destroying cause may seriously injure the survivor. Because this injured stalk does not thrive and produce well, it is unfair to infer that plants grow and produce better in hills than when single. But let the observation be made in a field where the stalks grow single in drills, and the result will probably be very different. I have no doubt that if the same number of stalks were planted in a similar soil—one parcel in drills, and the other in hills of three or four together, the former would produce ten per cent. more than the latter.

Many persons object to drilling corn because they cannot work it cross-wise with the cultivator, and must make use of hand-hoeing to keep it clear of weeds. When dropped drill fashion by hand after the plough, the grain will scatter the width of the furrow, and a considerable strip will remain untouched by the cultivator. But when the drill is used, the stalks stand in a direct line; so that no appreciable space need be left uncultivated—not even so much as in the usual cross culture.

Several drills have lately been constructed for planting corn, which I have not particularly examined—some of which have been thought deserving of a patent. Without intending any invidious remarks, I may be permitted to say that some of their defects are thought to be remedied in the one which I have constructed. EZRA MICHENER.

New Garden, 11th mo. 10th, 1838.

For the Farmers' Cabinet.

Indian Corn.

"There is nothing like Indian Corn."

The raising of 10, 15, or 20, or even 25 bushels of Indian corn to the acre, is a poor, mean business, and he who does no better than this is not worthy to be called a farmer; you should never go under forty, and this is no great scratch in these times of agricultural improvement. Fifty to sixty bushels to the acre is a good honest crop, and any thing above it may be called extra in our part of the world, and when it descends much below this quantity in a favorable season, there must be something the matter either with the farmer or his land; and an efficient remedy should at once be sought for, and applied to one, or the other, or both, as the exigencies of the case may require.

There is no crop cultivated that pays better for doing it right than corn; neglect it in any one particular, and you are sure to suffer a severe penalty for your negligence; this can be testified to by hundreds if you require proof of it.

There is not a farmer in the country but what will insist on his possessing the knowledge requisite to produce a first rate crop of corn; and yet how small is the proportion of those who accomplish it, even when the season is the most favorable for that purpose.

I shall not undertake to dictate to those who already know all about it, but simply inform those who intend to enter the lists for a good crop the coming season, that they had better begin to think about it soon, so as not to be under the necessity of making up their minds on too short notice; for this, like all other important matters, requires some thinking before you will be properly prepared for action. There is always some *theory* to arrange and adjust previous to the action or *practice*, and the sooner this is accomplished the better. Well, every body knows that corn thrives and produces best when it is well fed, and there is nothing pays better for full feeding than this gormandizer. Have you any dung to spare? if you have, don't omit to apply it; you can't put it to a better purpose. But perhaps it is intended to let the dung remain in the barn-yard, during the summer, to rot, and bleach, and wash away, and then haul the remains of it out on the oats stubble, which is to be sown with wheat; perhaps this may be right, but I confess I begin to have some serious doubts about it. But if it must be so, procure *lime*, say forty or fifty bushels to the acre, and spread it on your corn ground after it has been ploughed and harrowed, and see what that will do for you.

It will certainly pay a profit, and it is strongly suspected, (for what has been, may be again,) it will repay the whole outlay and leave a balance in your favor in the corn alone, independent of the benefits to be derived from the subsequent cropping in after years.

The time for planting and the manner of doing it, each one will determine for himself, for there is not a man in the country but thinks he knows at least as much, if not a *little* more about it, than any body else; so in regard to these matters, they must be left to their own sound discretion and superior judgment; but one thing, and one only, will I insist upon; and that is, *raise a large crop of corn*, not less than fifty bushels to the acre, and as much more as suits your convenience and circumstances; and, if you are not very well to do in the world, aim at sixty bushels by all means: rich men can afford to raise small crops without much injury, but poor men who wish to *raise* themselves in the world, should begin by *raising* large ones, and this course persevered in will be sure to bring them into the ascendant node. O.

P. S. I was well-nigh forgetting to request you, Mr. Cabinet, to tell our brother farmers not to forget to prepare a *nice* patch, not less than an acre, in the highest and dryest corner of the corn-field, for *sugar beets*. Plough it deep, pulverize it thoroughly, and manure it well; keep it clear of weeds, and stir the soil frequently during the season; and your cows, if they could express themselves vocally next winter, would pay you a handsome compliment; but as that is not likely to be the case, you will have to be satisfied with taking your pay in a greatly increased quantity of improved milk and butter. O.

For the Farmers' Cabinet.

Whitewash your Land.

The question respecting the utility of applying lime to the soil with a view of increasing its products, has so often been answered in the affirmative, that it is scarcely necessary to produce more testimony in corroboration of it. But a case so striking in its circumstances, which occurred of recent date with a highly respectable farmer in New Jersey, appears to justify giving a short narrative of it. He had a field of twelve acres of light sandy land, which he prepared and treated in the usual way, and sowed it with rye; when harvest time arrived the whole produce was one load, which was not an adequate remuneration for ploughing the ground. He now thought he must try to do better, and worse he could not do. He accordingly determined to *whitewash* this field and again sow it with rye. It was ploughed, and twenty-five bushels of lime to the acre was spread upon it, and rye sown; which produced an elegant crop, equal to any in the neighborhood, and far surpassing his most sanguine expectations; fully demonstrating the benefits to be derived from *white-washing* poor, light, sandy land. In this case the dressing was only about half what it should have been, but he was a prudent man, and no doubt thought that if he lost all, he would only lose half what he otherwise might, by making his whitewash a little stiffer.

I would be glad to furnish the name of the farmer above alluded to, but our farmers generally have a great objection to seeing their names in print; and many of them are very cautious about writing them oftener than is absolutely necessary. For this they no doubt think they have their reasons.—Some think that appearing in print savors somewhat of vanity, and should therefore be avoided, and that writing one's name has often led very honest, worthy people into great difficulty.

Depend upon it, there is nothing like *lime* for sandy land. A. B.

No man's spirits were ever hurt by doing his duty. On the contrary, one good action, one sacrifice of desire or interest, purely for conscience' sake, will prove a cordial for weak or low spirits, beyond what either indulgence, or diversion, or company can do for them.

For the Farmers' Cabinet.

Milk.

Milk is a fluid secreted by the female of all those animals denominated Mammaiia—and intended evidently for the nourishment of their offspring. The milk of every animal has certain peculiarities which distinguishes it from every other milk. The milk of the cow is most used by man as an article of food, and consequently more particularly claiming their attention. Chymists, therefore, have made choice of it for their experiments.

Milk is an opaque fluid, of a whitish color, a slight peculiar smell, and a pleasant, sweetish taste. When newly drawn from the cow, it has a taste very different from that which it acquires after it has been kept for some hours.

CREAM.

When milk is allowed to remain for some time at rest, there collects on its surface a thick unctuous, yellowish colored substance, known by the name of cream. After the cream is separated the remaining milk is of a bluish white color and is much thinner than it was before. If it be heated to the temperature of 100°, and a little rennet, which is water digested with the inner coat of a calf's stomach, preserved with salt, be added to it, coagulation ensues; and if the coagulum be broken, the milk very soon separates into two substances; a solid white part known by the name of curd, and a fluid part called whey. Thus we see that milk may be easily separated into three parts, namely,—Cream, Curd, and Whey.

CREAM CHEESE.

Cream gradually increases in consistence by exposure to the atmosphere. In three or four days it becomes so thick that the vessel which contains it may be inverted without risking any loss. In eight or ten days more its surface is covered over with mucous and byssi, and it has no longer the flavor of cream, but of very fat cheese. This is the process for making what in this country is called cream cheese.

Cream possesses many of the properties of an oil. It is specifically lighter than water; it has an unctuous feel, staining cloths precisely in the manner of oil; and if it be kept fluid it contracts a taste very analogous to the rancidity of oils.

These properties are sufficient to show us that it contains a quantity of oil; but this oil is combined with a part of the curd, and mixed with some cerum. Cream, then, is composed of a peculiar oil, curd, and cerum. The oil may be easily obtained separate by agitating the cream for a considerable time. This process is usually called churning.—The continuance of this operation for a sufficient time causes the cream to separate into two portions: one fluid and resembling creamed milk called butter-milk,—the other solid and called butter.

BUTTER.

Butter is of a yellow color, possessing the properties of an oil, and mixes readily with other oily bodies. When heated to the temperature of 96° it melts and becomes transparent: if it be kept for some time melted, some curd and whey separates from it, and it assumes exactly the appearance of oil.—When butter is kept for a certain time, it becomes rancid, owing in a good measure to the presence of these foreign ingredients, for if butter be well washed, and a great portion of these matters separated, it does not become rancid near so soon. Butter may be obtained by agitating cream newly taken from milk; or even by agitating milk newly drawn from the cow. But it is usual to allow cream to remain for some time before it is churned.—Now, cream, by standing, acquires an acid taste; butter, therefore, is commonly made from sour cream. Fresh cream requires longer churning before it yields its butter than sour cream does; consequently cream acquires, by being kept for some time, new properties, in consequence of which, it is more easily converted into butter which in all cases is perfectly sweet.

The affinity of the oil of cream for the other ingredients is such, that it never separates completely from them. Not only is curd and whey always found in the cream, but some of this oil is constantly found in creamed milk, and even in whey it has been ascertained by experiments that butter may be obtained by churning whey. This accounts for the fact that more butter may be obtained from the same quantity of milk if it be churned as drawn from the cow, than when the cream alone is collected and churned.

CURD.

Curd, which may be separated from creamed milk by rennets, has many of the properties of coagulated albumen. It is white and solid; and when all the moisture is squeezed out, it has a good deal of brittleness. Curd is used in making cheese, and the cheese is the better the more it contains of cream, or of that oily matter which constitutes cream. It is known to cheese-makers, that the goodness of it depends in a great measure on the manner of separating the whey from the curd. If the milk be much heated—the coagulum broken in pieces, and the whey forcibly separated, the cheese is scarcely good for any thing; but the whey is delicious and butter may be obtained from it in considerable quantity. Whereas, if the milk be not too much heated, (about 100° is sufficient,)

if the coagulum be allowed to remain unbroken and the whey be separated by very slow and gentle pressure, the cheese is good.

On the Varieties, Properties, and Classification of Wheat.

[Concluded.]

ON THE RELATIVE ADVANTAGES OF THE DRILL OR BROADCAST SYSTEMS.

Much has been written on this subject which still appears debateable. My own observation leads me to believe, that it rests mainly on the knowledge, skill, and long practise of the farmer. If a skilful and intelligent farmer, has for a long series of years, hoed, manured, and treated his land, *so as to have* eradicated all the seed weeds from it, and it remains in so clean a state that nothing but the intended crop will germinate; then indeed I should say the broadcast system would afford the greatest produce. But if the case be with most farmers, as my own, that the land to be cultivated, is loaded with the seeds of many descriptions of noxious weeds, then I contend the drill, or partly fallowing process, is that, which is alone likely to enable the farmer to obtain a compensating return from his crops. I have observed a field of wheat sown broadcast in very good rich soil, so completely over-run with weeds, that at the very lowest computation, two-thirds of it was lost. In every case where the ordinary means are adopted, whether the expensive process of hand weeding, or the much less costly mode of hoeing broadcast, it is attended with manifest risk if not most carefully and attentively performed, as any of the young tillers that may be drawn or cut, will reproduce fresh ones, the ears from which will ripen a fortnight or more, later than those which were uninjured; and the crop from such a mode of culture can never be, in the most fit state of ripeness for harvesting.

By the drill process, just before, or about the period that the wheat is forming its coronal roots, which, from wheat sown on the 18th January, I found, as may be seen by the plate, to be on the 17th of April, there is ample time to have it lightly but carefully hoed, so that the weeds may be completely destroyed, and the coronal roots find a well stirred soil to work in; moreover the plants, being in a free atmosphere between the drills so cleaned, which the weeds, previously to their destruction, breathed in common with them, have the whole benefit of the soil.

Those who desire to sow clover and rye grass, in the spring, will find it to be good practise to sow them a day or two before the first hoeing is given, as the same stroke which destroys the weeds, mixes the grass seeds with the soil, which then take possession of it sooner than a second crop of weeds; but this mode which I have found successful, in regard to the future hay crop, is, I consider, at the cost of several bushels per acre on the wheat crop.

My own practice is to put my seed wheat into fresh water, two or three bushels at a time, then stir it, till all the light, injured, or sickly grains are floated, or skimmed off; the grain thus cleaned is put to soak twelve hours in brine, made strong enough to float a potato; it is then put to drain, and is well dried with air slacked lime—no smutty ears appear after such treatment. The land is prepared by two or three ploughings, and a dressing of lime, ashes, or some suitable manure, according to the change required in the food of the seed. The wheat is then sown with a five row drill machine, in drills seven inches apart, at the rate of two, to two and a half bushels the acre, after potatoes, or parsneps.

One careful hoeing in April or May, is then sufficient to enable the wheat to get the upper hand of its enemies the weeds, for which purpose I use a hoe of my own invention, with a very narrow steel blade, not wider than a table knife, with a stout blunt back, and a very sharp edge, the sides being rounded off like some cavalry stirrups I have seen.—The workman is thus enabled to place the back of the hoe against the very roots or tillers of the wheat, and thus scoop out any weed from them. In hoeing straight along the drills, the work is performed very speedily, as the round projecting sides of the hoe guide the laborer, and prevent his cutting the plants; the blade being so narrow prevents any accumulation of earth on the hoe, which glides or cuts through the dry surface with great ease, and scarcely any resistance to the person using it. Women or even children can handle it with facility. My gardener has adopted it for all his drilled crops, finding it a safe, commodious, and very powerful instrument. The clover and grasses are sown immediately after the crop has been harvested, which has been found to answer remarkably well, though at the expense of one additional ploughing, a practice I have adopted, having observed it to be corroborative of Mr. Sinclair's experiments, who states in the "Hortus Gramineus Woburnensis," page 248, "I have sown the seeds of the same grasses in every month of the year, January excepted; and though much depends on the weather and state of the ground, the results were always in favor of the month of September, and the beginning of August; and next to that, the middle or latter end of May, according as the weather was dry."

This principle is obviously in accordance with common sense, for in the first place—the wheat crop receives the whole benefit of the manure which was intended for it, with-

out being deprived of any part of it by the grasses, the land is also as it were, partially fallowed by the hoeing, in the spaces between the drills, and is thus cleared and prepared for the grasses, at the most propitious season of the year, according to the high authority just quoted—while the stubble that is lightly turned in, is itself a manure for them, and keeps the soil open and light, in a proper state for the young seedlings.

Fallowing for a whole season is altogether too expensive a mode to be adopted by those who pay a high rent for their land, as paring and burning, and the drill system, or a sort of half fallow will answer the purpose equally well. From land in a very bad state infested with couch grass in 1832, by means of paring and burning, previous to taking a crop of potatoes, which produced thirty-four thousand eight hundred pounds of saleable potatoes the acre, and with an after dressing of forty bushels to the acre, of kelp or sea weed ashes, I raised forty bushels of fine wheat to the acre. One season I raised fifty-five, and last season fifty-one bushels to the acre; this year I hope to have reaped as much with drill husbandry, though on land in a very bad state, which had been much neglected.

These are not mere assertions without proof, as a reference to my corn and millers book, would furnish all the details.

It may be seen what a perch of ground might be made to produce, by multiplying the nineteen rows exhibited in the tables, by the produce of *No.* 8, *Koeleri;* which would give eighty pounds weight to the perch, or ninety bushels to the acre. Now, extraordinary as this may appear, I have no doubt that land, in a perfect state of tilth, and with seed suited to the soil and climate, may hereafter be made to bear that quantity.

Herodotus mentions an encouraging fact, which should lead farmers to hope, not indeed to rival the produce of wheat in Egypt, but greatly to increase their own. In his *Clio* it is stated "of all countries which have come within my observation, this is far the most fruitful in corn. Fruit trees, such as the vine, the olive, and the fig, they do not even attempt to cultivate; but the soil is so particularly well adapted for corn, that it never produces less than *two hundred fold;* in seasons which are remarkably favorable, it will sometimes rise to three hundred: the ear of their wheat as well as barley is four digits in size. The immense height to which Millet and Sesamum will grow, although I have witnessed it myself, I know not how to mention. I am well aware that they who have not visited this country will deem whatever I may say on the subject, a violation of probability."

This elegant and authentic historian, who flourished about four hundred and fifty years before the Christian era, speaks of wheat producing two or three hundred fold—it is true the soil and climate of Egypt are both highly favorable to the growth of wheat, but the produce is not extraordinary, if compared with the produce, from single ears of corn; as No. 7, which produced four pounds four ounces from fifty-six grains, reckoning 9,000 grains to the pound, is a produce between six and seven hundred for one. Hence may not our culture be hereafter brought to equal Egyptian produce!

RESULT.

By the evidence of Mr. Jacob, before the select committee on Agriculture, in 1833, whose authority is unquestionable, the average consumption of wheat, in the United Kingdom, may be about thirteen millions of quarters,* and the average produce per acre, of England and Wales, is about twenty-one bushels; this for the sake of argument I assume to be that of the whole Kingdom, though it will somewhat overrate it for Ireland and Scotland; then, deducting the average importation of wheat since the year 1828, or a million and a half of quarters, we have about four millions, four hundred thousand acres in wheat annually.

From the circumstance of some portion of the country producing less than that average, I will suppose the land under cultivation for wheat to be five millions of acres.

Now assuming the average price of wheat for the last five years, to have been fifty shillings the quarter, it will readily be conceded that any means that could enable the farmer to raise one quarter of wheat, nay half a quarter more per acre, would not only be a great individual advantage, but a very large increase of the national wealth; a nation is a great family, and whether it be merely a portion of the great family, a family of Rothschilds for instance, who are enriched by the intelligence, activity, and perseverance of one individual, or every individual who by the application of the same energies is enabled to increase his own income, it is still so much increase of the national wealth, augmented in the ratio of the number so actively employed.

It follows, if the mode I suggest, of raising wheat suited to each soil and climate, be adopted; it may reasonably be expected, in the course of a few years, such is the amazing productiveness of wheat, that the country will be supplied with suitable seed; and it is a consideration to which I earnestly call the attention of the Chancellor of the Exchequer; an increase of one quarter per acre, may be made to take place; even more than this in-

*A quarter is eight bushels.

crease has occurred on my own farm, where three quarters per acre, was formerly the average, but has now gradually increased, in three years out of four, (one year's crop having been sacrificed to an experiment) from three or four, to six quarters per acre. Hence, assuming the increase to be only one quarter per acre, instead of the two, or three, which have taken place on my farm; that increase on five millions of acres, at fifty shillings per quarter, would present an annual augmentation to the national wealth of twelve millions five hundred thousand pounds.

But this would not be the whole advantage gained. It is further stated by the same respectable authority, that one million and a half of quarters have been imported from abroad since 1828, which may have been purchased for about two millions sterling; or in other words, the English farmer lost that sum of money yearly which he might have received for his wheat; but which was sent out of the country, and paid to foreigners. Again, these differences are merely calculated on the wheat; it is necessary to take into calculation the increase also, in the quantity of meal, that will accrue, when the system of classification, and the knowledge of the properties of each variety of wheat is attained.

I have shown that eighteen pounds of good Dantzic and Rostock flour, only made twenty-three pounds of bread, also that eighteen pounds of a farinaceous variety of my own growth, have made twenty-six pounds of bread. Here we have an excess of three pounds of bread on eighteen pounds of flour, or of one-sixth, from two superior sorts of meal, and I shall rest satisfied to make my statements from these—though I am convinced, were I to make them from flour taken from the average mixtures which furnish the flour that is eaten all over the Kingdom, the increase would be greater.

In the farmers' series, No. 74, at the article "on wheat" we find, that a bushel of wheat averages forty-eight pounds of both kinds of flour, of that sort called "seconds;" hence if a superior sort of wheat be made to produce an increase of eight pounds of bread on every bushel; there would also be an increase of one shilling per bushel on ninety-two millions of bushels, or of four millions six hundred thousand pounds a year, being a general increase of value in the produce of wheat and flour, to the amount of sixteen millions, nine hundred thousand pounds sterling; to which may be further added, the sum that is annually paid by Englishmen to foreigners for corn, or two millions more, being a total increase of eighteen millions, nine hundred thousand a year. I shall expect to be told that these are mere idle and vain speculations, quite theoretical and visionary, but I claim for consideration the experiments of five years, and the facts that I have been enabled to deduce from them. I readily admit that to obtain the vast result I appear to jump at, a large and apparently unmanageable machinery would have to be put into motion, as well as the consentaneous action of, as it were, a whole people. But if only half, nay a quarter of the result is attainable, it is surely worth the attention of the Government, as well as of the whole body of agriculturists. It is not a system of harassing and vexatious taxation that I am advocating, to endeavor to relieve the country from a portion of the burthens which overcharge it; but a course of regular, slow improvement, sure and infallible in its result, acting steadily upon the best feelings, and individual interests, requiring only a regular system guided by one firm and powerful mind, to put the machinery regularly into play.

It is not surely, because the suggestion is simple, though new, perhaps I might add comprehensive; that it may not educe eminent and lasting benefits to the entire family of man. I am satisfied with pointing out this, as one of the means to relieve the agricultural interest, without going into further details; feeling persuaded that when the application of my principle shall have extended to red and yellow wheats, and spring wheats also, on neither of which I have yet treated, but have made many experiments, to be published hereafter; it will be seen that I have much underrated the mark. This proper adaptation of seed to particular soils, will have the effect of diminishing the risk of the farmer,—will therefore increase the demand for labor, and lead to an augmentation of the rate of wages.

The application of the principle is universal. I have therefore already sent some select samples to Persia, to North America, and to the West Indies; I only wish it to be given a fair and patient trial; it is in the proper and general application of it, that the adage, "Union is Power," will be found;—had I the means to set the machinery in motion, the result would be infallible, after the third or fourth seasons. It must also be kept in mind, that these results are calculated upon fair average crops, not on the differences which may exist between some of the best, and some of the worst varieties, that I have set forth in the tables, nor on the extremes between crops in general cultivation.

If such were the case, the results would be far more considerable, as the difference between the best red wheat and the most inferior sort, is greater than the difference in the white varieties. I shall further show, that the produce and value of spring wheats is various, should the hints I have thrown out, have been deemed worthy of attention.

For the Farmers' Cabinet.

A Good Cow—Good Butter, and a good deal of it.

Mr. Editor—As a good deal has been said relative to the quantity of butter, exhibited some short time since, by Mr. Kenworthy, made from one week's milking of a single cow, I was curious to ascertain the facts, as well with regard to her *keep* as the produce. I accordingly inquired in the proper quarter, and was informed that the cow Filton now about seven years old—was purchased of John Zane, of this county, with her dam, both for thirty-eight dollars. Filton at the time of her purchase was four months old. This is all the information I have been able to obtain.—Mr. Kenworthy informed me that her keep was as follows: a small quantity of hay in the morning, then a mess of bran, while eating which she was milked, then about half a peck of grains, well mixed with a suitable portion of cut stuff, with the addition of a little salt. She was then *well curried*, then watered, and especial care taken that she did not drink too much. If the weather was favorable she was permitted to run in the barn-yard, if not she was stabled again, and fed with hay only.—At noon and night she was treated in the same way as above described in every particular, except that the grains were omitted at noon. Milked, morning and evening, the quantity of milk varying from *twenty-two to twenty-eight quarts* per day. The following is the produce of butter from the two weeks' milking:

First week's butter	18 pounds.
Second week's	16½
	34½

Three pans of milk, belonging to the second week's milking were frozen, and thereby lost. The butter was very beautiful in appearance, and of a very superior quality, and we hope that many of our fair countrywomen will follow the example of Mrs. Kenworthy, who deserves no little credit for her care and attention to the duties of her dairy. J. M——e.

For the Farmers' Cabinet.

Agricultural Nuisances.

Every good man should lend a hand to remove a common nuisance.

The Cabinet, by its extensive circulation, having become the organ of communication among farmers, and the seeds of useful information having been sown broadcast by it throughout the country, I ask the privilege of occupying a few inches of one of its pages to represent a grievance, and to inquire for a remedy. In most neighborhoods there are respectable, careful, conscientious farmers, who not only look to, and regard their own interests, but are considerate and watchful in respect to those circumstances which may in any way interfere with, or prejudice the interests of their neighbors. Besides these, and often *beside* or contiguous to them, there are a kind of farmers, of a very different description and character, who not only neglect to promote their own best interests, but are totally reckless in respect to the performance of neighborhood duties. One of the most common defalcations of this sort is that of permitting weeds of all the usual pernicious varieties to grow up to maturity, and to disperse their seeds throughout their neighborhood to the great annoyance and injury of others as well as themselves. The St. John's wort, mullen, wild carrot, thistle and numerous others, which it may not be necessary to enumerate, are sown through whole districts of country, by the unpardonable neglect of duty of comparatively a few individuals.—Where the seed is light the wind conveys it for miles, and where it is heavier and is not supplied with wings, as is the thistle, in the winter when snow covers the ground and its surface is encrusted, the seeds of the mullen, wild carrot and St. John's wort are blown to incredible distances, and it often happens that he who raises the seed has least of it deposited on his own premises: while his careful, painstaking, industrious neighbor suffers a grievous infliction, in the shape of myriads of vile pests growing among his grain and grass, partaking of the precious nutriment which had been carefully provided for the sustenance and growth of his own crops. The winter of 1837—38, when the snow furnished the most complete means of conveyance for this description of seeds, the mullen and many other seeds were scattered broadcast through the land, to the dismay of many a worthy farmer; and as many of these plants are either biennial or perennial, if very vigilant means are not resorted to the approaching spring, heavy loss and damage will result from the presence of these unwelcome intruders on our premises. A universal declaration of war should be declared against them at an early period, and no quarter given; nothing but extermination will do the business.

But the main question is, what are we to do with those farmers who constantly preserve, and are the means of perpetuating the stock of these intruders and robbers? This is the disease for which we want a remedy. Would it be too much for these republican people to ask their legislature to pass for them an act. similar to that which is in force in France? Where, if a farmer neglects to extirpate the weeds growing on his grounds, any person aggrieved may employ hands at the *expense* of the delinquent, and cause them to

be taken up root and branch and cast into the fire.

How would it do for the constables or supervisors of the roads to be authorized by law, at the expense of the respective townships, to remove such nuisances from our borders? I merely make these suggestions, hoping some of your ingenious correspondents will turn their thoughts to a subject of so much interest to the agricultural community, and let us hear from them. Agricola.

For the Farmers' Cabinet.

Chickens.

An observing boy will make an intelligent man.

I was pleased with the communication of "M," on the "'Gap' in Chickens," and not the less so on the account of his "little son" having made the investigation alluded to. If boys keep their attention alive to making such discoveries, and their parents are careful to forward them to the Cabinet, we shall soon have recorded numerous very important facts; for I have long observed that intelligent, observing children are more likely to make original discoveries and remarks than those who are farther advanced in life. But there is one word, or term, used in the communication, which I suspect is not the right one, and I therefore take the liberty of directing the attention of the youth to it, that he may examine again and see which of us is correct. He states "that numerous long worms, about the thickness of a common pin, were found in the *wind-pipe*." Now the *wind-pipe* is the passage to the lungs, through which *only* air or wind passes when the animal breathes; it is called by doctors the *trachea;* the upper end of it is covered by a little trap-door or flap that rises and lets the air in when breathing, but whenever food or drink is passing into the stomach or crop of the fowl, this trap-door is closed, and it passes over it like a bridge, and goes down the *gullet*, *throat*, or *esophagus*, (as the *meat-pipe* is called by men of science) into the crop, whence it passes on to the gizzard, which I suspect is the proper stomach, where it is thoroughly ground, as between "the upper and the nether mill stone," till the nutricious portions of it are in a fit state to be taken up and converted into blood, to repair any casual damage, and to nourish the system; and the parts which are not suitable for nutrition are cast off into the draught. Now it is probable the worms, or the eggs out of which they were hatched, were swallowed by the chickens without being sufficiently crushed or chewed, as is too common with young people as well as young chickens with their food, and vitality not being destroyed, they grew, and were nourished by the heat and contents of the crop, till they began to be uneasy in their confined situation, and were seeking a way out, when they produced pain and suffering, by passing or attempting to pass over the little bridge before mentioned, which impeded the respiration of the chick, and by this means would have suffocated it, had not a remedy been applied in due season. The feather with the turpentine, I think must have passed into the gullet, and not into the *wind-pipe*, otherwise it would have been more certainly and speedily fatal than the worms. It is said that the common red pepper broken up and mixed occasionally with the food of chickens is beneficial to them, furnishing a stimulus to the organs of digestion, and enabling them the better to perform their functions. A Father.

2d mo. 18, 1839.

THE DAIRY.

No. I.

On the Management of the Dairy, particularly with respect to the making and curing of Butter.

BY DR. JAMES ANDERSON.

When a dairy is established, the undertaker may sometimes think it his interest to obtain the greatest possible *quantity* of produce, sometimes it may be more beneficial for him to have it of the *finest quality*, and at other times it may be necessary to have both these objects in view, the one or the other in a greater or less proportion; it is therefore of importance he should know how he may accomplish the one or the other of these purposes, in the easiest and most direct manner.

To be able to convert his milk to the highest possible profit in every case, he ought to be fully acquainted with every circumstance respecting the manufacture both of butter and of cheese; as it may in some cases happen that a certain portion of that milk may be more advantageously converted into butter than into cheese, while another portion of it would return more profit if made into cheese. It is not, however, intended in the present essay to enter into this wide discussion. Here, it is only proposed to treat of the manufacture of butter, leaving the subject of cheese-making to some other person to treat of, who is more conversant in that department than the author of this essay.

The first thing to be adverted to in an undertaking of this nature is, to choose cows of a proper sort. Among this class of animals, it is found by experience, that some kinds give milk of a much thicker consistence, and richer quality than others; nor is this richness of *quality* necessarily connected with the smallness of the *quantity* yielded by cows of nearly an equal size; it therefore behoves the

owner of a dairy to be particularly attentive to this circumstance. In judging of the value of a cow, it ought rather to be the quantity and the quality of the *cream* produced from the milk of a cow in a given time, than the quantity of the milk itself. This is a circumstance that will be shown in the future to be of more importance than is generally imagined. The small cows of the Alderney breed afford the richest milk hitherto known; but individual cows in every country may be found, by a careful selection, that afford much thicker milk than others; these therefore ought to be searched for with care, and their breed reared with attention, as being peculiarly valuable.

Few persons who have had any experience at all in the dairy way can be ignorant, however, that in comparing the milk of two cows, to judge of their respective qualities, particular attention must be paid to the time that has elapsed since their calving; for the milk of the same cow is always thinner soon after calving, than it is afterwards; as it gradually becomes thicker, though generally less in quantity, in proportion to the time the cow has calved. The color of the milk, however, soon after calving is richer than it afterwards becomes; but this, especially for the first two weeks, is a faulty color that ought not to be coveted.

To make the cows give abundance of milk, and of a good quality, they must at all times have plenty of food. Grass is the best food yet known for this purpose, and that kind of grass which springs up spontaneously on rich dry soils is the best of all.* If the temperature of the climate be such as to permit the cows to graze at ease throughout the day, they should be suffered to range on such pastures at freedom; but if the cows are so much incommoded by the heat as to be prevented from eating through the day, they ought in that case to be taken into the cool shades for protection, where, after allowing them a proper time to ruminate, they should be supplied with abundance of green food fresh cut for the purpose, and given to them by hand frequently in small quantities fresh and clean so as to induce them to eat it with pleasure.* When the heat of the day is over, and they can remain abroad with ease, they may be again turned into the pasture, where they should be allowed to range with freedom all night during the mild weather of summer.

Cows, if abundantly fed, should be milked three times a day during the whole of the summer season;† in the morning early, at noon, and in the evening, just before night-fall. In the choice of persons for milking the cows, great caution should be employed; for if that operation be not carefully and properly performed, not only the quantity of the produce of the dairy will be greatly diminished, but its quality also will be very much debased; for if all the milk be not thoroughly drawn from a cow when she is milked, that portion of milk which is left in the udder seems to be gradually absorbed into the system, and nature generates no more than to supply the waste of what has been taken away. If this lessened quantity be not again thoroughly drawn off, it occasions a yet farther diminution of the quantity of milk generated; and so on it may be made to proceed in perpetual progression from little to less, till none at all is produced. In short, this is the practice in all cases followed, when it is meant to allow a cow's milk to dry up entirely without doing her hurt. In this manner, therefore, the profits of a dairy might be wonderfully diminished; so that it much behoves the owner of it to be extremely attentive to this circumstance, if he wishes to avoid ruin. It ought to be a rule without an exception, never to allow this important department to be entrusted, without control, to the manage-

*So little attention has hitherto been bestowed on this subject, that I do not know of any regular set of experiments that have ever yet been made with a view to ascertain the effects of any of the natural grasses that spontaneously spring up in abundance on our fields, either on the *quantity* or the *quality* of the milk of cows, and few that have been attempted even with regard to those plants that have been cultivated by art as green forage for them; though it be well known that some particular kinds of plants strongly affect the taste, and alter the quality of particular products of milk. It is indeed, in all cases, confidently asserted, that old pastures alone can ever be made to afford rich butter or cheese. This, however, I know from my own repeated experience to be a popular error, as I have frequently seen much richer butter made by one person from cows that were fed in the house chiefly with cut clover and rye-grass, than that which was made by others, where the cows were fed on very rich old pastures. Mankind are in general disposed to throw the blame of every failure upon some circumstance that does not reflect on themselves as bad managers.—Hence it is that the grass of a farm is often blamed for the want of richness of the butter produced upon it; when, if the circumstances were fully investigated, it would be found to be occasioned by the unskilfulness of the dairy-maid, or the want of attention in the choice of proper cows.

*In very warm climates, where the heat is extremely oppressive to cows, and the flies are exceedingly troublesome, sheds open on one side, the roof being only supported there by pillars, would not afford them such effectual shelter as they would require. In these cases, the sheds should be walled up on both sides, and be left open only at the two ends, which, if properly placed, would produce a continued stream of air throughout the whole building, that would prove highly salutary to the cattle.

†If cows be milked only twice in the day [24 hours] while they have abundance of succulent food, they will yield a much smaller quantity of milk in the same time than if they be milked three times. Some attentive observers I have met with think a cow in these circumstances will give nearly as much at *each time*, if milked three times, as if she were milked only twice. This fact, however, has not, that I know of, been ascertained by experiment. There can be no doubt but they give more, how much, is not ascertained; nor whether it would be advantageous in any case to milk them four times, or oftener; or what effect frequent milking produces on the *quality* of the milk.

ment of hired servants.* Its importance will be still more manifest from what follows:

In the management of a dairy, the following peculiarities respecting milk ought to be very particularly adverted to; some of them are, no doubt, known in part to attentive housewives, but they never yet, I have reason to believe, have been adverted to as their importance deserves; and by many have never been thought of at all. I put them down in the form of aphorisms, that they may be the more adverted to, and the easier retained.

APHORISM I.

Of the Milk that is drawn from any cow at one time, that which comes off at the first is always thinner and of a much worse quality, than that which comes afterwards, and the richness goes on continually increasing to the very last drop that can be drawn from the udder at that time.

Few persons are ignorant, that milk which is taken from the cow last of all at milking, which in this country is called *stroakings*, is richer than the rest of the milk—but fewer still are aware of the greatness of the disproportion between the quality of the first and the last drawn milk from the same cow at one milking. The following facts respecting this circumstance were ascertained by me many years ago, and have been confirmed by many subsequent experiments and observations.

Having taken several large tea-cups exactly of the same size and shape, one of these tea-cups was filled at the beginning of the cow milking, and the others at regular intervals till the last, which was filled with the dregs of the stroakings. These were each weighed, the weight of each cup being settled so as to ascertain that the quantity of milk in each was precisely the same; and from a great number of experiments, frequently repeated, with many different cows, the result was in all cases thus:

1. The quantity of cream obtained from the first drawn cup was, *in every case*, much smaller than from that which was last drawn; and those between afforded less or more, as they were nearer the beginning or the end. It is unnecessary here to specify these intermediate proportions; but it is proper that the reader should be informed, that the quantity of cream obtained from the last-drawn cup, from some cows, exceeded that from the first, in the proportion of *sixteen* to *one*. In other cows, however, and in particular circumstances, the disproportion was not quite so great; but in no case did I find it fall short of the rate of *eight* to *one*. Probably, upon an average of a great many cows, it might be found to run at *ten* or *twelve* to *one*.

2. The difference in the *quality* of the cream, however, obtained from these two cups, was much greater than the difference in the *quantity*. In the first cup the cream was a thin tough film, thinner and perhaps whiter than the paper on which I write; in the last, the cream was of a thick *butyrous* consistence, and of a glowing richness of color, that no other kind of cream is ever found to possess.

3. The difference in the quality of the *milk* that remained after the cream was separated, was perhaps still greater than either in respect to the quantity or the quality of the cream. The milk in the first cup was a thin bluish liquid, like as if a very large proportion of water had been mixed with ordinary milk; that in the last cup was of a thick consistence and yellow color, more resembling cream than milk, both in taste and appearance.

From this important experiment it appears, that the person who, by bad milking of his cows, loses but half a pint of his milk, loses in fact about as much cream as would be afforded by six or eight pints at the beginning, and loses besides that part of the cream which alone can give richness and high flavor to his butter. Many other useful corollaries may be drawn from it, which I do not at present stop to enumerate. Some of them will occur in the sequel.

APHORISM II.

If milk be put up in a dish and allowed to stand till it throws up cream, that portion of cream which rises first to the surface is richer in quality, and greater in quantity, than what rises in a second equal portion of time; and the cream that rises in the second interval of time is greater in quantity and richer in quality than that which rises in a third equal space of time; and that of the third than the fourth, and so on, the cream that rises decreases in quantity, and declines in quality continually as long as any rises to the surface.

My experiments not having been in this case made with so much accuracy as in the former, I have not been enabled to ascertain the difference in the proportion that takes place in equal portions of time; but they have been so often repeated as not to leave any room to doubt the fact; and it will be allowed to be a fact of no small importance in the management of the dairy. It is not certain, however, but that a greater *quantity* of cream may upon the whole be obtained from the milk by taking it away at different times, but the process is so troublesome as not to be counter-balanced by the increased quantity

* Cows should always be treated with great gentleness, and soothed by mild usage, especially when young and ticklish, or when the paps are tender; in which last case, the udder ought to be fomented with warm water before milking, and touched with the greatest gentleness, otherwise the cow will be in danger of contracting bad habits, becoming stubborn and unruly, and retaining her milk ever after. A cow never lets down her milk pleasantly to the person she dreads or dislikes. The udder and paps should always be washed with clean water before milking; but care should be taken that none of that water be admitted into the milking pail.

obtained, if indeed an additional quantity be thus obtained, which is not as yet fully certain.

APHORISM III.

Thick milk always throws up a smaller proportion of the cream it actually contains to the surface, than milk that is thinner, but that cream is of a richer quality; and if water be added to that thick milk it will afford a considerably greater quantity of cream than it would have done if allowed to remain pure; but its quality is at the same time greatly debased.

This is a fact that every person attentive to a dairy must have remarked; but I have never heard of any experiment that could ascertain either the precise amount of the increased quantity of cream that might thus be obtained, or of the ratio in the decrease of its quality; but it ascertains the effects at least of mixing water with the milk in a dairy; and the knowledge of this fact will enable attentive persons to follow that practice which they think will best promote their own interest.

APHORISM IV.

Milk which is put into a bucket or other proper vessel and carried in it to any considerable distance, so as to be much agitated and in part cooled before it be put into the milk-pans to settle for cream, never throws up so much nor so rich cream, as if the same milk had been put into the milk-pans directly after it was milked.

In this case it is believed the loss of cream will be nearly in proportion to the time that has elapsed, and the agitation it has sustained after being drawn from the cow. But I am not as yet in possession of any experiments that sufficiently ascertain how much is to be ascribed to the time, and the agitation, taken separately. On every branch of agriculture we find experiments wanting at each step we advance in our enquiries. The labors of no one man can complete the whole; but it is the duty of every enquirer to point out as he goes along where they are wanted.

Short Directions for Planting Garden Vegetables.

The first thing to be done in gardening is to prepare the ground. It is necessary that a garden soil be deep and loose, that the roots of vegetables may penetrate it, spread and imbibe nourishment. Depth of soil also prevents drouth by its capability of containing and consequently retaining a greater quantity of moisture than a shallow soil, and it prevents drowning by being capable of holding more water without being flooded.

Where not already done, manure should be now drawn upon the ground intended for gardening, to be intermixed with the soil by deep and thorough ploughing. Where manure fresh from the stable is brought, and cannot be spread and ploughed under immediately, it should be piled in a heap, and then covered with soil three or four inches thick, and this with a coating of lime, in order to retain the exhalations during fermenting, which otherwise would pass into the air, and carry off a large portion of the best quality of the manure. If earth cannot be had at this season, in consequence of the ground being frozen, a greater quantity of lime must be applied; or ashes may be first spread over, as a substitute for earth. In addition to the lime thus preventing the waste of manure, its usefulness to the soil after it is spread upon it, will far overbalance its cost.

As a deep soil cannot always be had at once, the defect may be partially remedied by throwing the soil into ridges upon which the crop is to be planted. Of course in those ridges there will be an accumulation of loose and rich earth. But it is much better to have a soil so deep and well manured as not to need this expedient.

Most garden crops are sown in drills or small furrows drawn with a hoe or stick; and where it is stated in directions that seeds are to be planted in drills of any described depth, it is to be understood that they are actually buried only about one half that depth, as the earth is taken from the sides of the drill for covering. A convenient way of sowing some garden crops in drills, is to lay a board across the prepared bed, draw a stick to form the drill along the edge of this board, drop the seed and cover it, and then move the board forward, placing it upon the planted drill, and proceed with another as before. This forms them straight, and by standing during the operation upon the board, it presses the soil firmly about the new planted seeds, and consequently assists their vegetation. Another and more rapid mode of forming drills is to make a tool like a rake head, but much larger, so that each tooth, when it is drawn through the soil, may form a drill, at the required distance from the others.

Rolling is advantageous wherever the ground is not so wet or adhesive as to be injured by the operation. It presses the fresh earth about the seeds, and keeps them moist until they germinate. When a roller is not at hand a substitute may be obtained by laying a plank or board upon the newly sown bed, and then walking upon it lengthwise. Nothing, perhaps, protects turneps, and other plants which are injured by the turnep fly, from its depredations, so much as rolling.—By pressing down the soil and rendering the surface smooth, it destroys their hiding places. Such seeds sprout soon, and they are sometimes destroyed by insects even before they reach the surface, in which case the seedsman is sometimes unjustly blamed. Seeds sown in ground inclining to be dry, need watering, especially if they are enveloped in a dry shell. Among those which most

require a moist soil or watering, are lettuce, onions, parsnep, parsley, asparagus, capsicums, celery, rhubarb, salsify and spinage.

With these preliminary remarks we now proceed to give particular directions for planting each vegetable of the most common kinds.

Cabbage. The early kinds may be sown in hot beds, in the latter part of March, and in a few weeks they will be fit to transplant in the open ground. Or, they may be sown a little later in a warm border, under the south side of a board fence. Red cabbage may be sown early in May, and Savoys and the large winter drumhead, almost any time during the month. Cabbages should be transplanted into very rich ground, for this general rule applies particularly to them, that all vegetables where the growth of leaf and stalk is the chief object, are greatly benefitted by copious manuring. When transplanted, the small early cabbage, as the early sugarloaf and the early York, should stand about two feet apart, and those larger a greater distance according to their size, the large winter drumhead, for instance, should be at least three feet.

Broccoli. The Purple Cape is the only variety we would recommend for common culture; those who wish to raise the other kinds must consult books on gardening, as they require care and minute directions. The Purple Cape should be sown about the middle of May, and when of suitable size should be transplanted in uncommonly rich ground, and they will produce fine heads early in autumn.

Cauliflower. This requires more care than the last; it commonly succeeds best when sown early in fall and transplanted into beds which are protected from the winter by frames, and sash, and mats. It succeeds well, however, if sown very early in a hot bed, and afterwards transplanted, as the plants become larger, into a later hot bed, and finally into open ground in the latter part of April.—These if well managed will produce heads in June. If sown early in May, cauliflowers may be treated the same way as Purple Cape Broccoli, and with nearly the same success.

Kale and *Brussels Sprouts* may be sown about the middle of May and transplanted early in July in rich ground. They are used as greens, and are best after having been touched with sharp autumnal frosts.

Asparagus. The seeds should be sown early in spring in the best ground in the garden, in drills about one foot apart. They may be transplanted into beds when a year old. They will not, however, produce good shoots for use in less than three years. An asparagus bed properly prepared, will continue to afford crops for twenty years or more. New beds are made by transplanting, thus: dig the ground eighteen inches or two feet deep in the form of a broad trench, fill this trench with alternate layers of soil and manure, until near the top, when the whole should be covered with a few inches of rich mould, in which the roots should be planted, with the crowns about three inches below the surface, and about one foot apart. Or, the bed may be sown with seed at once, and the plants afterwards thinned. Old beds should be cleaned off early in spring before the plants start, and then covered two or three inches with rotted manure, which should be dug in with a fork, taking care not to injure the plants.

Globe Artichoke may be raised from seed or from young suckers taken off in spring. The seed should be planted in drills about one inch deep and about one foot apart. When the plants are a foot high, they are to be transplanted into ground trenched eighteen inches deep and mixed with manure, the plants standing about three feet apart, or three by five feet according to Bridgman.

Peas. The early varieties should be sown as early as possible in the spring. Double rows are the most convenient, and these double rows should be about a foot apart, and a space of from four to six feet, according to the height of the peas, between these double rows. Peas should be sown about two inches deep, and two or three inches asunder in the rows.

Beans. English beans should be planted so early that they may produce their crop before the heat of summer; the seed should therefore be put in the ground on the earliest opening of spring. A clayey loam is best, but a lighter soil is good if they are well rolled. The drills should be about two inches deep and two or three feet apart, and the seed two or three inches in the drill. The Mazagan and Lisbon are the earliest, and the Genoa best for late crops. The Windsor, the Sandwich, and the broad Spanish are excellent.

The kidney or common bush and pole beans, require a light rich soil, and may be planted in hills, three or four seeds to a hill, or in drills two or three feet apart, and two or three inches in the drill. As kidney beans are tender and easily injured by frost, the planting should be delayed until settled warm weather, which brings them forward rapidly.—Pole beans require the same treatment as bush beans, except the addition of poles.

Cucumbers, melons, and *squashes,* should be planted about the first of May, in highly manured ground, or in copiously manured hills, about four feet apart. In clayey ground it is indispensable to success to plant them on ridges of manure, covered several inches with earth; these ridges should be at least a foot high, and they will produce twenty times the

amount of crop that is obtained the common way. As soon as they are up a person should go over them three times a day, and pinch to death with his thumb and fore-finger all striped bugs which can be found upon them, and continue this operation until the plants are beyond their reach. The best cucumbers are the Early Green Cluster, and the Long Green Prickley. The green fleshed Nutmeg melon is most excellent for eating.

Carrots require a deep rich, sandy loam.—They may be sown in drills a foot or eighteen inches apart, and six or eight inches distant in the drills. The Early Horn is the earliest, and the Long Orange is the best for main crops.

Beets. Those intended for early crops should be sown as soon as the ground is open, and main crops deferred till warm weather in May. They need a deep soil and plenty of manure, and may be sown in drills one foot apart and one or two inches deep, about three inches apart in the drills, afterwards to be thinned to about eight inches. Among some of the best for eating are the *Sugar* and Red Turnep rooted.

Parsneps should be planted as early as possible in drills, like beets, and in common with all root crops require a well manured soil.

Parsley should be sown early in drills one foot apart and one inch deep.

Salsify, or vegetable oyster, requires the same treatment as carrots and parsneps.

Onions may be sown about the middle of April, and buried half an inch deep in drills twelve inches apart. When of suitable size they are to be thinned to a distance of two or three inches in the drill. One of the best varieties is the Silver-skinned; the Strasburg is good for a general crop.

Lettuce may be sown as early as is desired, either in a hot bed, or in open ground.

Egg plant may be sown in a hot bed, the sash to be closed to keep in the heat until it is up. In the middle or at the end of May, the plants are to be set out two feet apart in good garden soil. If transplanted too early it will be hurt by frost.

Celery should be sown as soon as spring opens, in drills half an inch deep, and afterwards transplanted in open ground in proper trenches for earthing.

Sea Kale requires a deep rich sandy loam, as the roots penetrate to a great depth, and should be sown as early in the spring as the state of the ground will admit, in drills, an inch and a half deep, twelve or fifteen inches apart, and six or eight inches in the drill.—When a year old they are to be transplanted more than a foot apart, and blanched by covering them early with sand, gravel, or what is much better, inverted pots. Three or four weeks are required for the blanching.

Tomatoes are best raised by sowing them in hot beds, and afterwards transplanting them into open ground. If the soil is rich, they should stand when transplanted, at a distance of at least two or three feet from each other. —*Gen. Farmer.*

For the Farmers' Cabinet.

On the Sowing of Grass Seeds.

It must be admitted by every careful observer, that the art of husbandry in this country, has much advanced within the last few years, and the march of improvement in agriculture is still onward; while at the same time it is evident much remains to be accomplished, to vie with European countries in the productiveness of the soil. The introduction of root crops, (such as sugar beet, mangel wurtzel, ruta baga, &c.,) by many of our most enterprising farmers, has been found of such great importance for the feeding of stock, that there is no doubt the cultivation of those roots will soon become general; may we not also profit by the experience of older countries in the cultivation of the different kinds of grasses. It is a common practice in England, for farmers to sow many varieties of grass seeds together, with reference to their time of maturity, so that after mowing a crop of timothy or other tall kinds, instead of finding the ground as bare as a stubble field, they have an undergrowth of later varieties of grass, already covering the soil, and shooting forth to maturity; of the latter kinds, white clover holds a very conspicuous rank, being so thickly set as to produce in a short time, a quantity of herbage little inferior to the first mowing; the quality of which for either hay or pasture is supposed to be unrivalled.

I have been led to these remarks by meeting with one of our enterprising farmers (Mr. John Hocker of Whitemarsh, near Flowertown,) who was then purchasing white clover seed at a store in Market street. In the course of conversation, he informed me that he had sown one bushel of white clover seed, in the month of March last, on seven acres of his wheat ground, which produced (after the grain was harvested) a very large, and excellent crop, and that he was so much pleased with the experiment, that he intended to adopt it for the future. He also spoke of several neighbors who would follow his example the present season. M. C.

Education is a better safeguard for liberty than a standing army. If we retrench the wages of the schoolmaster, we must raise the wages of the recruiting sergeant.—*Ed. Everett.*

For the Farmers' Cabinet.

Effects of Lime.

The fertilizing influence of lime seems now very generally understood and appreciated by the farmers of our country. Long doubted and viewed with distrust and incredulity—the evidence of well attested facts, numerous and conclusive, has at length forced the conviction of its utility upon the most sceptical and the most ignorant. With its mode of operation we are still unacquainted, and shall remain so, until scientific analysis and experiment shall have discovered its chymical action upon the soil, the atmosphere, and upon plants. The time may come when science shall regard agriculture as not unworthy her attention, and farmers be able to pursue their operations, guided by well established principles, instead of, as at present, by the uncertain light of isolated facts. In the meanwhile we must be content to use to the best advantage such knowledge as we possess.

We know that lime does increase the productiveness of the soil, though how or why it does so—whether by altering its texture—or by stimulating to activity the animal and vegetable matter contained in it—or by attracting moisture from the atmosphere—or by itself furnishing the food of plants—or by all these, are matters of doubt. Questions, they are, certainly, of great interest and importance, and until they and others of a similar nature be decided, there can be no regularity in the processes of agriculture, or certainty in its results. Leaving them however to the discussions and investigations of the learned, it is the business of the practical farmer to inquire into the effects of lime upon *crops*—the best mode and time of applying it—the quantity to be applied—and the expense and subsequent profit. His own experience and that of others are the only means of acquiring this kind of knowledge, and every fact, therefore, the truth of which may be depended on, and which is stated with a sufficiently minute detail of circumstances, is of importance.

Agricultural journals—which have increased of late years so greatly in number, excellence and circulation, are the most convenient means for the diffusion of this kind of information; their cheapness puts them within the reach of every one, and their columns are open to all, to record the observations and results, suggested and produced by practice and experience. A mass of facts will thus in time be accumulated, and the knowledge of them circulated through the community,—which will inform the ignorant,—guide the inexperienced,—convince the prejudiced,—suggest experiments to the curious,—stimulate enterprise to new undertakings,—give definite objects and increased power to industry,—and by introducing into every portion of the country the most improved modes of cultivation,—increase the productiveness of the soil, and with it, the wealth and importance of its owners.

It is the duty of every one to contribute his share of exertion to the promotion of these worthy objects. We should all feel interested in the advancement and improvement of the calling to which we belong, and should be unwilling to receive benefits from others, and render none in return. I have myself derived much instruction and advantage from the pages of the different agricultural journals, in this and other states—which have done and are doing such extensive good to the country, and feel that I am only discharging an obligation, incumbent on every one, when I offer to the readers of the Cabinet, a statement of the results of an experiment of my own in the use of lime.

I must begin by saying, that in the year 1835, I commenced the improvement of 400 acres of worn out land on the river Sassafras, Cecil co., Maryland. The place had been farmed for many years after the (happily *now*) *old* fashioned Maryland system of three fields—two of grain—(wheat and corn) and one of *weeds*, without grass, lime, or other manure, than such as was furnished by a scanty stock of half-fed cattle. The land, though naturally of the finest quality, had became so much exhausted, that five bushels of wheat and twenty of corn per acre, was considered a fair average crop. Confident of the superiority of the soil, and of the efficacy of those means which have produced such happy results in other *less favored* regions, I commenced by dividing the farm into a greater number of fields—by introducing a rotation of crops, and by the employment of clover, plaster and lime, according to the mode pursued in Pennsylvania. Aided as I have been by the intelligence, energy and zeal of an excellent tenant, my success has greatly exceeded my expectations, proving beyond question the fertility of the soil, and the rich resources of a district hitherto neglected and abused, but which nature formed for a garden and a granary. My object now however is to state a single instance, and not the general result—for which I shall, perhaps, find time, if the courteous editor will find space, on some other occasion.

The operation to which I allude was performed upon a field of forty acres lying on the river. It had been much exhausted, and eight bushels of wheat per acre would have been considered a good crop.

In the spring of 1835 it was sowed with oats and clover, and plaster was applied at the rate of two bushels per acre. It produced

about 22 bushels of oats per acre, and the clover was pretty good.

In 1836 one bushel of plaster per acre was applied, and *burnt oyster shells* at the rate of eighty bushels per acre. The clover was good; it was lightly pastured and ploughed under in August. Wheat was sown on the first of October.

In 1837 from the forty acres were obtained 1032 bushels of very fine wheat—weighing more than 60 lbs. to the bushel. On rather less than 20 acres of the field, 24 bushels of white bearded wheat were sown, and produced more than 600 bushels. On the rest, 32 bushels of yellow bearded wheat produced about 400 bushels.

This field has a south western exposure, and slopes down to the river shore with a gentle descent. The land varies in texture, from a clayey loam to a sandy loam, and is of a reddish, chocolate color. The stiffest soil is in the lower part of the field next to the river, which becomes gradually lighter as you ascend to the highest part, where it is quite sandy. With the texture of the soil varied the quantity of the wheat, which was heaviest on the lower side of the field next the shore, where it must have been in some places about 40 bushels per acre, and grew gradually thinner, until on the most sandy parts the quantity was not more than 10 to 15. Both grain and straw were of the finest quality. There was no grass seed sown with the wheat, but the growth of weeds and white clover after harvest was very great—showing the strength and fertility of the soil.

In the spring of 1838 this field was planted in corn. In the early part of the season it grew with great luxuriance, attained very soon a large size, was of a dark rich color, and gave promise of a crop of at least 50 bushels per acre. The unexampled drought of last summer, however, destroyed these hopes. The corn crops throughout the country was seriously injured—in many places utterly ruined. This field, notwithstanding the severity of the season, produced about 20 bushels per acre, which before the lime was applied would have been considered a fair crop, and the quantity of fodder was large.—This result, I consider, under the circumstances, quite as satisfactory as 60 bushels per acre would have been, in an ordinary season.

The oyster shells were obtained from Worton Point, at the mouth of the Chester river, where, and elsewhere on the Chesapeake waters, they exist in immense beds; marine deposits probably—though some suppose them to have been collected by the Indians. They were delivered, burnt, on the farm, for 8 cts. per bushel.

From these data, those interested in the subject may calculate the profits of liming, and otherwise improving, exhausted land, which is *naturally of a good quality*.—It is obvious at once, that in this instance, one crop of clover ploughed under,—3 bushels of plaster and 80 bushels of oyster shells per acre, produced a crop, the difference between which and former crops, more than repaid all the capital applied, and left the soil with its productive power more than doubled.

Exhausted land of the finest quality is to be found in great abundance on the Eastern Shore of Maryland, though happily, a newly awakened spirit of industry and enterprise is rapidly diminishing its amount. Along with it exists also abundant stores of marl and oyster shells. The country is penetrated in every direction by navigable rivers which give easy access to the markets of Baltimore and Philadelphia. The surface of the land is undulating, it is free from stones, and is easily worked. The causes of its decay would not be perhaps difficult to determine; but how its numerous and obvious advantages have escaped for so many years the hawk-eyed vigilance of capitalists and speculators, and the prudent enterprise of industrious farmers, whilst wealth and population have flowed with so full and steady a stream into the remote wildernesses of the west, it is not so easy to discover. Whatever may have been the cause, it exists no longer. The veil has been at length withdrawn, and both natives and strangers have become acquainted with the natural fertility of the soil,—the ease with which it may be made productive, and the undeveloped resources of the country. A better system of farming has been very generally introduced—old prejudices have been dissipated—northern capital is flowing in—the price of land is rapidly rising—and industry, guided by superior knowledge, supported by increased means, and wielding those wonder-working instruments, clover, lime, and plaster, will speedily alter the aspect of the country, and cover its "old fields" once again with luxuriant harvests.

EVELYN.

To the Editor of the Farmers' Cabinet.

Ploughs and Ploughing.

SIR,—On looking back to the past numbers of the Cabinet, I am struck with the real practical knowledge which is conveyed in a remarkably well written paper by Mr. Buckminster, at p. 48, vol. 1, "On Ploughs and Ploughing." I consider the information which is there given invaluable; and to convince any one that the writer is a practical man, in the best sense of the word, it is only to observe the advice given, "to set the coulter anglewise, and leaning to the right, that the furrow-slice might be cut in a bevel form, so as to shut in like a trap-door." Now every

farmer can understand all this, but few others would be able to make any thing of it.

His remarks on the proper mode of laying newly ploughed land, and the advice thoroughly to roll and harrow after turning in green sward, by which the whole mass of vegetable matter that covered the soil will be completely buried, and set to fermenting, are truly excellent, as are also his observations on the kind of plough that ought to be used for this purpose, namely, "one which is much longer in the waist than those in common use, that the furrow might be made to rise less suddenly on the inclined plane of the mould plate, and fall gently, where it should do, into the bed of the preceding furrow, so as completely to fill it." All this shows that the writer is a *ploughman*, and his suggestions ought to be respected accordingly.

Are any of your readers acquainted with a plough which has been patented in England, and is known there as "Jefferis's wet and dry weather Plough?" I used it for some years in that country, and I can truly say I have never seen any plough which could at all be compared with it for the purpose of *turning* the soil. Its length and great weight would be very serious objections with gentlemen who are accustomed to plough the study; but to a *Buckminster*, who would not be afraid to look the thing in the face, it would soon recommend itself for its peculiarly well-adjusted parts, its simplicity of construction, and above all, the ease and regularity with which it performs its work. The share, which is put off and on by the blow of a hammer, is of cast iron; the under side is as hard as cast steel, while the upper, or surface is as soft as wrought iron, which surface, wearing away much more quickly than the under side, leaves the wing or fen with a sharpened edge, and the share with a sharpened point, which never require to be renewed as long as it lasts. These shares are sold separately, and cost but a trifle; they are also cast of different widths, to suit different kinds of work. In this plough, the length of the beam and handles are so mathematically adjusted to the length of the mould, plate, and waist, that when used as a swing plough, it is as easily poised as a well regulated scale-beam: a small wheel is sometimes attached to it, to enable the ploughman to give a greater pressure when skimming turf land, or in extremely dry and hard soils, but in all ordinary cases it is preferable as a swing plough. It has been introduced into the West India Islands with the most perfect success.

AGRA.

25th February, 1839.

Men generally put a greater value upon the favors they bestow, than upon the favors they receive.

For the Farmers' Cabinet.

Is Lime a sceptic or an antisceptic Agent?

Nature never changes her principles of action.

Your correspondent M. in the last number of the Cabinet, page 229, states that X. says various matters and things respecting lime; now I should like M. again to read the essays of X. on lime at pages 27, 60, and 152 of the present volume of the Cabinet, and compare them with his own communication, and perhaps he may find that he has either misunderstood, or not correctly and fully represented what X. has writen on the subject referred to. M. says, that, "its (that is lime) great distinguishing characteristic is to promote decomposition." X. says, that lime is an antisceptic, and tends to retard decomposition. On this point we are at issue, and I presume that all minor differences of opinion between us will resolve themselves into this one point. Now, whether lime is, or is not an antisceptic, is a matter of fact, and not a matter of reasoning; the reasoning will follow the determination of the fact, and this must be ascertained either by experiments and observations already made, or to be made hereafter. M. says, page 229, "Because lime applied with the whitewash brush to our fences or roofs, has a preservative antisceptic tendency, it does not follow, that its exhibition in the soil, in different quantities, and where various chemical agents are at work, modifying its action, should be attended with the same results." Does not lime either in small or large quantities preserve timber of every kind? Has it not been applied to boards, fences, and roofs for ages with this intention, and has it ever been unavailing as a preservative against decomposition? It is a common saying among lime burners, that a superannuated lime wagon (which is always saturated with lime) never rots.

Within the past year a patent has been taken out for the preservation of rail-road timber by lime, which it might seem would be unavailable, if its only tendency was to render its decomposition more rapid. Hence we may safely conclude that so far as respects timber M. is correct, and is fully supported in stating that it "has a preservative antisceptic tendency."

It is freely conceded that if a large quantity of quick or unslacked lime be mixed with vegetable matter, that combustion will take place, and it will be reduced to a carbonaceous mass; and it is presumed that this circumstance has given rise to the opinion of the decomposing agency of lime; but when a moderate quantity of lime, or lime that has been slacked and become cool, is mixed with vegetable matter, so far as my observation and inquiries have extended, its tendency is to

retard the process of decomposition. It has often been spread on heaps of manure, and on cornstalks, for the purpose of decomposing them, but I have yet to learn, that it has produced any other effect, than to retard that process. Straw and cornstalks are bleached of a beautiful yellow color by lime; but their decomposition is not hastened but retarded by its presence.

I have made numerous inquiries of respectable, intelligent farmers who are in the habit of using lime, on this subject, and have without an exception so far, found them to concur in the opinion that lime retards decomposition. Both before, and since the appearance of M.'s essay, the question was propounded to a number of chemists of the first standing who, without an exception, gave the opinion that lime was an antisceptic.

The putting of lime into privies is to prevent putrefaction and the consequent disagreeable effluvia; and it is often applied to the carcasses of dead animals for the same purpose.

Some years since, the writer, then holding the same views of the decomposing tendency of lime which M. now espouses—for that was the orthodox creed when he was young—undertook to have a dead horse converted into a soluble manure without any unnecessary delay, and the plan adopted was, to *salt* him well inside and out with quicklime and then to cover him up with earth, like a potato heap. He was visited often and examined, but the process was not found to progress with the expected rapidity, and after the lapse of about a year it was discovered that the lime had robbed the carcass of its juices, and that it was in the state of pretty decent jerked-beef, and not likely soon to become soluble. Another carcass of a horse, covered with earth only, decomposed in a much shorter period of time within a few yards of the former.

In the present volume of the Cabinet, page 152, is an extract from the last edition of Davy's Agricultural Chemistry, which corroborates the opinion of the antisceptic tendency of lime.

It is the opinion of many farmers who have had much experience in the use of lime, that vegetable manure is more enduring where lime has been applied, and this opinion accords well with the position that lime retards decomposition. For the preparation of food for plants by decomposing vegetable or animal matter bears a strong analogy to cooking food for animals; it should be cooked as it is needed for current consumption, otherwise there will be loss; so it is apprehended of manure as food for plants, that the nearer an approach we can make to decomposing it and rendering it soluble as it is needed for their sustenance, the more economy and the less waste; and lime it is conceived enables us in some measure to accomplish this important object by retarding decomposition, and keeping the formation of the solution in check, so as to furnish it only as food for plants as it is wanted, and not to be washed away to a depth where it cannot be made available for that end.

The plan at present generally adopted of applying manure which is thoroughly decomposed, and consequently in a state to be immediately dissolved by rain, is believed to be attended with much waste, as the plants, when in an infant state, and requiring the least food are supplied with it the most bountifully; and when they arrive at a larger growth and would seem to demand it in greater abundance, much of it must have been washed so deep into the earth (particularly in loose soils) as to be beyond the reach of the fibres of the roots.

M.'s paragraph, at the top of page 230, is not comprehended, either from its not being intelligible, or want of ability to understand it. X. has not expressed any opinion in his essay about applying lime before it becomes a carbonate, as is stated by M. in the last paragraph. He has some opinions on this subject which it is not necessary now to state, as the accumulation of facts in which he has been for some length of time engaged may throw additional light on that subject.

The object X. has principally had in view in writing the essays on lime, published in the Cabinet, was, in the first place, to prevent impositions being practised by the dealers in it; and in the second, to call the attention of farmers to the facts connected with, and observed in its application to the soil. If those who apply it to their land, would make careful observations on its effects, and particularly note any observations tending to show either its *sceptic* or *antisceptic* qualities, and forward them for publication in the Cabinet, much benefit might arise from it in establishing a correct theory, and a sound and profitable practice in its application to land. X.

Trifolium Incarnatum.

To the Editor of the Farmers' Cabinet:

Sir,—Your correspondent, Mr. Pennock, p. 135, 2d vol. Cabinet, wishes to obtain further information respecting the *Trifolium Incarnatum*, which is there denominated "A NEW KIND OF CLOVER." I beg to say it is by no means new, for in the Botanical Catalogue, I find it described as a native of Italy—hardy, flowering in July, flesh colored blossom, and having been catalogued as far back as the year 1640—it is therefore only brought again

under the eye of the agricultural world, and the circumstance of its having gone out of notice for so long a time is, I think, any thing but in its favor. A friend, having sent me some of the seed from London, I feel pleasure in depositing a small quantity with you for distribution, and if you will place it in the hands of those who will take the *pleasure* of doing justice in its cultivation, a considerable quantity of seed may be obtained from the plants that might be raised from these seeds the coming season, and during their growth, a fair opportunity would be afforded for observations, which may appear, *laudatory* or *condemnatory*, in the Cabinet, at the end of the summer. May I be permitted to urge those who undertake to make the experiment, to keep the plants clear of weeds while growing.

May I also, in my turn, ask of your readers information, as to the cultivation of a plant, (Lucerne) which, from its first introduction to notice, has never ceased to call forth the approbation of all who have been concerned in its culture. I wish to learn if it has ever been properly attended to in this country, and what success has followed its introduction into a climate, peculiarly adapted, one would suppose, to its growth. Incarnos.

Corn and Seed Planter.

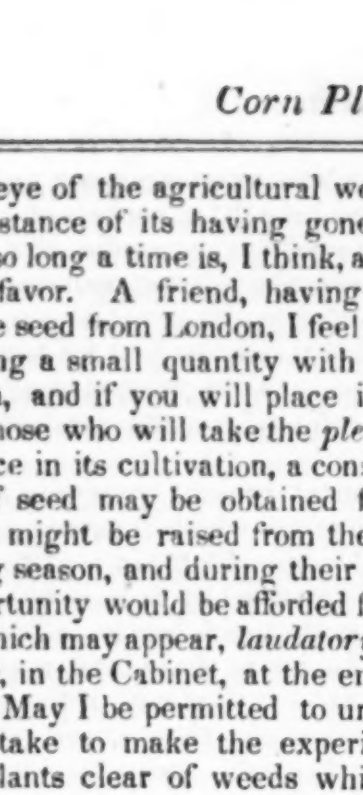

Fig. 33.

This machine, recently invented by W. Buckminster, Esq. of Boston, is said to be an entirely new article in this country; *has been fully proved, and found to answer completely, for the planting of corn and turneps.* On any land tolerably well prepared, one man with a horse will furrow out, drop, cover and press down the corn on an acre of ground in one hour—or ten acres in a day; this is the work of 20 men. A double machine that plants two rows at one time, can be used in large fields, where a man and horse are warranted to plant three acres in one hour—rows four feet apart—30 acres in one day! The corn in this machine is covered by the falling into the furrow of the soil that is finely pulverized by a row of cultivator teeth—no sods or weeds therefore can intrude as in case of a drag that has been used to haul dirt on to the seed, neither is the seed ever disturbed by such drag, but remains scattered along about five inches in the furrow. The machine will bury the seed three inches deep if you desire it—one inch is the rule for corn—one-fourth of an inch for turneps—by simply turning a screw you sink the corn deep, by turning it back you bury more shallow. Last summer 170 square rods of ground were sown with ruta baga, in 18,000 hills, in 55 minutes—here were 48 hours' work performed in one—1¼ lb. of seed only was used—the seed came up very uniformly well, and was covered more evenly than it could be by hand. Cotton seed—beans and onions—may be equally well planted with this machine. The whole machine is cast iron except the handles.

☞ Arrangements have been made for a supply of the Corn Planter, which may be had in a short time at the new Agricultural Depository, No. 87 North Second Street, Philadelphia. The machine is exceedingly simple, and not likely to get out of repair, and its performance as above stated will be warranted.

For the Farmers' Cabinet.

Cows vs. Horses.

An idle horse gives no milk and makes no butter.

Having read a communication in the last number of the Cabinet signed H., on the "cost of keeping an idle horse," I find the sum of sixty dollars as there set down, quite within the mark; and I should not know how to accomplish it for that sum by a long slice; and if H. was to take shoeing and liability to contingencies into the account, it would considerably swell the aggregate amount. On examining the subject and looking a little further into it, I find that the cost of keeping "one idle horse," will keep two milch cows comfortably, and that each cow during the year will produce, (including the calf) a clear gain of thirty dollars without any straining of the point whatever. This makes sixty dollars per annum *profit* from the two cows, which added to the sixty dollars *loss* sustained by keeping "an idle horse," instead of the cows, at the same cost, makes a difference of one hundred and twenty

dollars a year, or the interest of two thousand dollars for one year, and so on from year to year as long as the error is persisted in. I knew a very worthy, industrious, careful farmer, about fifty years ago, who had a snug farm and every thing apparently in good order about him, but he did'nt seem to thrive; when he died, it was found he was not out of debt; and his estate was altogether much less than was expected. I tried in vain to account for it, but was unable to do so, till after this long lapse of time; but now I can see through it, and understand it thoroughly. I remember, he kept about a dozen horses, on a farm of about 100 acres, and he kept them well, too; sleek, clean, nice and well fed; for he was fond of horses, and fine ones too, though he was no sportsman. His horse stable was twice as large as his cow stable. The cows were about six in number, if my memory serves right, at this long distance of time.—Now four or five horses would have been all-sufficient for his necessary purposes, and all over this number was surplusage, as the lawyers say; say seven above the right number, which would represent, in expense of keep, fourteen cows. As butter in those days only sold for about half as much as it does in these latter times, I put the profit of each cow (including the calf) at one half, say fifteen dollars a year, and fifteen times fourteen is two hundred and ten dollars a year, loss sustained by keeping seven extra horses instead of fourteen cows.

Now, our schoolmaster, who is good at calculation, says, that an annual sum of 210 dollars put to interest at 6 per cent., and a like sum added to it each year, and the interest accruing annually being put out to interest, that in ten years it will amount to $2,767 96
and that in 20 years it will be 7,724 97
25 years, 12,070 19
30 years, 16,602 21
40 years, 32,500 01

Now this shows very plainly why the old man died in debt, instead of leaving a good farm for each of his children. It is just as plain to me now, as that grass grows; though for a long series of years it was quite inexplicable, notwithstanding I had often thought of it, and tried to solve the mystery; but I now see I always went on the wrong scent, and when you do that you will never catch the game. I now am confirmed in the conclusion that whatever we understand is easy, and that whatever we don't understand is difficult and mysterious. The old gentleman was all his life traveling on the wrong track, to arrive at independence and wealth, and I now see many going the same road on horseback, and there can't be a doubt but they will come out at the same place with the old farmer alluded to; for like causes always produce the same effects under similar circumstances.—Some of the old folks who are your readers, will very likely be desirous of knowing who the old farmer was that kept so many horses and so few cows. If that question should be asked, just inform them, that he has been dead a great many years, but that he was my father, and a good father he was too, but he did'nt seem to think, that idle horses made no butter. ABRAHAM.

To the Editor of the Farmers' Cabinet.

Lime—Mr. Black's Experience.

I have just read a paper—the first in your number of 15th of February, 1839—signed R. M. Black. The very name is associated in my mind with agricultural enterprise and improvement; but the communication loses all its value with me, because, while it proposes to illustrate the value of *lime*, the writer says that the fall before he applied the lime the field *had been manured!!* and yet he does not say what kind of manure—how much to the acre—nor does he ever after advert to the *manure* as one of the means whereby the crop was increased, but goes on reasoning to show the effect of *lime*. Now I am aware that to give efficacy to lime, you must have some vegetable matter for it to act upon; but who can tell in this case without knowing the quantity or quality of the other manure, how much the increase of the crop, raised the *spring* after it was applied, is to be ascribed to the "manure" and how much to the lime? Seeing that the lime cost 25 cents a bushel, it must have been stone lime; it would have been more satisfactory as a matter of curiosity and comparison with its cost in other places, if Mr. Black had stated how far it was transported by water and by *land*, to bring it to that price.

Please inquire of Mr. Black whether he has seen a recent communication in the Farmer and Gardener, from the Eastern Shore of Maryland, going to show that *shell lime*, as a manure, *is valueless*, and what is his experience, if any, with that sort of lime; for I doubt if any of your correspondents is more capable than he, of benefiting his brother farmers, by a detail of their experience on any branch of husbandry with which his position, resources, and observation have made him familiar. In haste, J. S. S.

Baltimore, 18th February, 1839.

For the Farmers' Cabinet.

Lime.

MR. LIBBY,—In common with many other farmers of this neighborhood, I am much interested in the use of lime as a manure, and hail with a feeling of triumph any well authenticated account of its successful application to the soil, not because there are not al-

ready evidences enough of its utility, but that so many are yet holding back with a strange and suicidal incredulity. It was therefore with pleasure that I read the statement of Mr. R. M. Black set forth in your last Cabinet, thereby showing conclusively that lime is the cheapest, most prompt, and efficient manure that can be applied to the soil of Delaware, (unless it should be in her marl regions, which are now under a fair course of experiment with this valuable mineral, and I hope before long to be able to give you a very favorable account of the result.) But to return—it is creditable to Mr. Black that he has broken through the old customs of his vicinity, and that he has furthermore not hid his light under a bushel, but has favored the farming public with an account of his experiments. But interest makes keen critics of us all, and in the detail of his operations Mr. Black, though minute, has not been so circumstantial as many could have wished; for example, he does not state whether the *whole* 25 acres were manured previous to liming, or whether he manured only the twenty that were limed, leaving the 5 without any dressing at all, which I do not suppose was the case, as it would not have been a fair experiment. But if the 5 acres were manured, how is it that the produce in 1835 was greater without manure than in 1838, after it had been manured? Could the difference be caused by the season? Or were the 5 acres originally poorer than the rest of the land? In which case the trial cannot be called a fair one.

I hope, therefore, we shall hear again from Mr. Black upon these points. I have no doubt whatever of fairness in the experiment, yet as these inferences may be drawn from the statement in question, he will at once perceive their importance, and that the *test* of the whole affair hinges upon the treatment of the 5 acres, and their previous condition.

Yours, &c. Calcium.

Middletown, Del., Feb. 26, 1839.

For the Farmers' Cabinet.

Try Salt.

There are many well attested cases on record, and I think some of them in the Cabinet, of the benefit derived to grain and grass by the application of small quantities of common salt, say from two to three bushels to the acre. Who, now will undertake to try the experiment this spring, on a small portion of wheat and also on grass. Procure a bushel, it won't cost much, and put one half of it on wheat, and the other on grass, and make report of the result through the Cabinet. The cost of this experiment would be less than one dollar; try it, and that soon too, the earlier the better, and let us know whether it is for good or evil. S.

For the Farmers' Cabinet.

Boiling Oats.

A farmer, who last autumn had a boiler holding about forty-five gallons, enclosed in brick work, with grate, &c., and who used it to good effect in boiling corn, &c. for his fattening hogs; has since applied it for boiling oats, which is afterwards mixed with cut hay or straw, and fed to his milch cows. The result of this mode of feeding them has been highly satisfactory and encouraging, and is believed to furnish a fair remuneration for expense and trouble. A few weeks since, being desirous of salting his cattle, he injudiciously put about two quarts of salt into the boiler, with the water and oats, and continued the boiling for the usual length of time, but with a very different result from what he had before experienced.

In his previous boiling operations without salt, the oats were much swelled and enlarged, but when the salt was present, the grains refused to obey the usual law of absorption and enlargement, and continued about of their usual dimensions; the salt water remaining mixed with the oats in the boiler, but not absorbed by the grain. The first thought was that the oats, being of a superior kind, (the large potatoe oat) to that previously used, which was the common oat usually sown, the effect might be occasioned by the difference in the grain; but on trial since without the presence of salt, with the same kind of grain, the usual swelling and enlargement took place. From this it appears evident that salt or brine in some way produces the effect of preventing the grain from absorbing the water. Can any of the readers of the Cabinet furnish a satisfactory reason for the production of such a result? O.

For the Farmers' Cabinet.

Sand or Lady Pea.

It appears, by an article signed O., in the 3rd Vol., 4th No., page 115, of the Cabinet, that (with the exception of Indian not given,) peas and beans rate highest on the catalogue of nutritives, containing from 89 to 92 per cent. Now as the pea or rather bean, at the head of this article, will grow on the poorest sandy land, and produce from 15 to 25 bushels per acre, I think the article might be cultivated with great advantage in the pine lands of New Jersey, and other places too remote from lime, marl or other manures, to bear the expense of their application, without which, a good crop of corn cannot be expected: and as peas and beans are used in England as we use corn, for the fattening of hogs, would it not be well for the inhabitants of such districts to follow their example and see if they cannot have their *pork-tubs* as well filled for

winter use as those who live where corn thrives best.

In feeding this article to hogs, it should be either coarsely ground, steamed, or boiled, the latter method is preferable.

It is also in much demand for soup, and would no doubt bring at the present time $2 to $2 50 per bushel: the two past seasons the price was from 1 50 to 2 dollars.

E.

For the Farmers' Cabinet.

Multum in Parvo.

COOKING FOOD FOR STOCK.

The practice of cooking the grain fed to stock, particularly the stock intended for the shambles, promises to be an important acquisition to modern husbandry. It is destined, at no remote period, to remove materially, if not effectually, those tributaries of intemperance, those foul manufactories of *liquid fire*, or *blue ruin*, (the bane of agriculture) from the face of our country. To proscribe and denounce the distillers (among whom we recognise some of our most sober and enterprising citizens) while their business continues profitable, is wrong; an unavailing means *only* of opposing a powerful human motive, that of self-interest and aggrandizement. But when farmers once *know* that it is more profitable in the end to feed all their grain (excepting wheat—and of that, the *stuff* after making flour) after being cooked, to fatten stock for the market,—when they find they can thus realize a high market price for their grain, and convert both straw and grain into an increased quantity and highly improved quality of manure, they will not sell their grain to the distiller, to wrong their own farms of their most enriching means of alimentary manure, and suffer the distillers to monopolize the beef, pork, and mutton market among themselves. If farmers would cook and feed all their own grain, in addition to roots previously steamed, we should soon see the good effect visible in the abundance of their crops, as well as a compliance with the immutable laws of nature, which make animals and vegetables mutually dependent, and, like liberty and learning, lean on each other for support. Independent of pecuniary considerations, an agreeable, pleasant, and pure delight always accompanies the "*luxury of doing good.*"

Actuated by fixed impressions such as these, I commenced about two years ago, to cook grain for stock. Having previously pursuaded myself that stall feeding on raw grain, by undergoing a mere *partial* digestion, is an "uphill business," I found also the idea of steaming grain *whole*, liable to many objections; among others, the difficulty of steaming it *thoroughly*, the inconvenience and additional expense of fuel, arising from the high temperature necessary, to burst the globules containing the dextrine or nutrient matter of the grain, are all worthy of notice. And the plan of scalding the chopped grain, falls far short of cooking. The conviction, that very much of the nourishing property of grain is lost by the process of fermentation and distillation, and yet aware of the aptitude of all kinds of stock to fatten on the swill of distilled grain, after the essence or volatile spirit has been extracted, I conceived the plan of *boiling* the grain, after being chopped, to be fed *sweet and fresh;* conjecturing, that a given quantity of grain thus prepared, would be converted into the greatest possible weight of flesh. I named the project to some intelligent persons, who condemned it as fallacious and chimerical, alleging that the chopped grain would settle to the bottom and burn the still; the boiled grain would scour the stock, &c.; reason and philosophy however supported a contrary opinion. Although the *idea* originated in my own mind, having never heard nor read of grain being boiled in the manner proposed, yet, I had no apprehensions about the issue. I accordingly procured a large hogshead still, put it up over a furnace in the corner of an out-kitchen, on the best plan of close flues carried around the still, and finally turned into a chimney. The still was provided with the usual copper chains and fixtures for stirring: a moveable cover made of plank was fitted *close* over the top of the still, perforated in the centre to admit the perpendicular shaft on which a horizontal crank was fixed to turn the shaft and stir the still. The still is filled, or nearly so, with water, by a convenient pump, and after boiling, the corn being previously wetted in a barrel with cold water, and mixed, to prevent the grain from forming lumps, is emptied by buckets into the still; the cover is immediately put on, and by means of the crank the still is well stirred and the fire kept up, while the stirring is occasionally repeated for a few minutes, until the whole mass boils, then the fire is put out or covered, or the damper closed, to stop the draught. After the grain has boiled about an hour, it is ready to leave off; if left in the still, owing to the confined rarified air around the still, it will continue boiling for many hours, although the fire be entirely out. The swill is conducted hot from the cock of the still by common square spouts, about thirty yards, into a hog-pen and cattle-yard; when cool, it may be compared to jelly or starch, the water being apparently commuted into solid nutriment. I usually boil, in the proportion of one bushel of grain to forty gallons of water. For *fattening*, I have found one third of corn to two-thirds of bran, sufficient; but if the fattening process is to be hastened, the

proportion is reversed—taking two thirds corn and one third oats or bran. I stable-fatten steers at night, on hay and fodder in winter, (as it is only in winter I do cook feed,) and yard them with plenty of feed through the day; by keeping the yard well littered, an immense quantity of manure can be made. By this method, cattle and hogs are fattened in half the time that is required on raw grain, with an economy of *grain* infinitely great. The cattle get a sleek and handsome coat, they void their manure in a proper healthy consistence, exhibiting nothing of a diuretic nature. The food being thus ready prepared for the stomach, there is little action required from the digestive organs. Nor is the appetite liable to be clogged, as on raw grain. Although I commenced feeding in a *small way*, with only eight head of steers and twenty hogs, yet, I soon found I could feed more than double the number: in short, my fondest hopes were more than realized, and expect in future to profit by the experiment. My cattle have access to salt at all times. I have found about four cords of oak wood sufficient, along with corn cobs, for a whole winter season. Stone coal may be used with advantage in the absence of other fuel. Hogs are perhaps our most profitable stock, but we cannot *now*, like the pioneer settlers, let them feed fat, on mast. Stock hogs I can also winter at a mere *nominal* expense on weak swill. After feeding my cows with a given quantity of raw meal, I boiled and fed them precisely the same quantity—the consequence was, they gave a surprising increase of milk and cream. My whole apparatus cost $35.

STEAMING.

This mode of cooking I confine entirely to every variety of roots. With a vessel bored full of holes in the bottom, and fitted on the top of the still, I can steam any quantity with the greatest imaginable ease; and after removing the roots, the water in the still is ready to boil the grain. Potatoes, mangel wurtzel, and ruta baga have composed our staple roots; to these we have recently added the citron pumpkin, and rohan or Swiss potato. Their extensive culture is identified with the farmer's interest, affording through our long winters a plentiful supply of succulent food, an important auxiliary to aid the juices of the animal stomach in the performance of their functions, when stock is made to subsist, almost wholly, on dry fodder.

DELUSIONS OF AGRICULTURAL SCIENCE.

Having been egregiously misled in youth, by endorsing the speculative notions and ultraisms of agricultural writers, on many very important subjects, I have long since refused to adopt any radical opinion until I could demonstrate it by experience and observation. Last summer I secured some of the principal depredating insects, and watched them carefully while undergoing their natural transformations. I have traced the cut-worm to its original perfect state, and found, too, the practice of preparing seed wheat with a view to destroy the egg of the Hessian fly in its nidus on the grain, only equalled by the erroneous notions which prevail relative to lime, plaster of paris, stable manure, and other paralleled absurdities. The time must come when a deluded and slovenly farmer will be regarded as one of the greatest enemies to the public. At present, the only *known security* against the Hessian fly is, to sow late, after the fly has been crippled by the autumnal frosts; yet, if an ignorant neighbor, by early sowing, has nourished the fly through the winter in the chrysalis, our adjoining crop is sure to be attacked by his progeny in the spring; just so with noxious plants and weeds, a slovenly neighbor can keep our grounds infested, maugre all our efforts. Some of our farmers, however, adhere to their delusive notions with wonderful pertinacity; like the devotees of astrology and alchemy in the days of yore, they are true to their idols.

AGRICULTURAL SOCIETIES.

What a reproach to Pennsylvania, that its numerous agricultural population are without a State Society! The fault rests upon the farmers themselves; they have not united to petition the Legislature. The petition from the farmers of Union county, in 1837, was favorably received in the Senate, and brought forth an able and encouraging report from Mr. Harper, chairman of the Agricultural Committee. Here, although our county may be fairly ranked, with regard to the natural constituents of soil, the most productive in the commonwealth, the farmers, as yet, have exhibited no *general* disposition to resolve themselves into a county agricultural society, for the purpose of making a joint stock of their knowledge. The advocates, however, of the new augmenting system, blending theory and practice, science and art, are multiplying amongst us. A wonderful and decided improvement has been effected within a few years in the economical management of productive labor, a source itself, of prosperity to the farmer. Let farmers only be liberal, let them be kind and charitable to mother earth, she in turn, will be sure to requite them with her bounty, and force them to acknowledge her as the fertile parent of their daily bread and prosperity. I would here *just* suggest the idea of holding an Agricultural State Convention at Harrisburg—who will second the motion?

ICE HOUSES.

With this caption, I communicated an ar-

ticle some months ago, in the September number of the Cabinet. I omitted an important item: I should have stated that the whole frame, including the doors and roof, all about six inches thick, is weather-boarded, outside and inside, and the space or vacuum well filled with tanners' bark, instead of the double frame. The roof may be shingled outside of the rafters and boarded inside, filling up the interstice with bark as the roof progresses. This plan, on top of the ground, has entirely superseded the old system of digging a vault or well. By using rye straw plentifully around the sides and on top, it is found to waste much less than the old system under the earth.

WM. PENN KINZER.

Springlawn Farm, Paquea, Lan. co., Pa., February 28th, 1839.

For the Farmers' Cabinet.

Fragments.---No. V.

"Gather up the Fragments that nothing be lost."

GIRLS.

Girls, be *industrious*, and observe *economy* in every thing, even in *time;* be *neat* and *tidy*, rise *early*, and keep *stirring* to some *useful* purpose; dress so as to preserve your *health*, leave nothing for others to do, that you can accomplish yourselves, cultivate your *minds*, and eschew the least appearance of *evil* in your *manners* and *conduct;* so shall you enjoy as much *comfort*, *happiness*, and *independence* as is allotted to mortals in this uncertain world, and you will stand a very fair chance of becoming united to some *clever*, *industrious* youth in the bands of *matrimony*, and of becoming a first rate *wife* and *mother*, "ruling your own household well," and dispensing *blessings* all around you.

ENTAILED ESTATE.

Every man who desires to *entail* a valuable and enduring *inheritance* on his children which cannot be *docked;* of which rogues cannot *defraud* them, and on which the sheriff can't levy *execution*, and which they can't alienate by a general *assignment;* may accomplish his wishes by bringing them up in habits of *persevering industry* in *any useful calling*, by instilling into them habits of *sound economy;* and, above all, by imbuing their minds with correct and practical views of *moral and religious obligations.*

BOYS.

Boys, treat the horses *mildly*, the cows *gently*, the sheep *kindly*, the hogs *mercifully*, and the poultry *prudently;* so will you be promoting your own true interests, and be aiding in carrying out practically a religious obligation, enjoined on all, to treat dumb creatures with *humanity.*

HARD BED.

Parents, who endeavour to protect their children from labor, and encourage them to seek self-indulgence, instead of animating them to become as industrious and useful as possible; are foolishly and certainly preparing for them a *hard* and *a thorny bed* to lay upon at a subsequent period of their lives.

FATHERS AND MOTHERS.

Fathers and mothers, be *kind* and *affectionate*, but *firm* and *resolute;* and, above all, always *reasonable;* so shall you command the *respect* and *obedience*, that your station at the head of a family so imperiously requires.

LONGEVITY.

There are none who enjoy better health of body, and more vigor of mind, than those who are daily engaged in bodily labor; and it is only the industrious or laborious who live frugally and temperately, who enjoy true comfort and survive to a great age.

MOTHER.

A mother who works her fingers' ends off, in order that her daughters may attain and preserve a *delicacy* of constitution, is more to be blamed for her folly than praised for her diligence, or extolled for her wisdom.

A New England farmer said, that last year he had made 1500 dollars by minding his *own* business, and 500 dollars by letting the business of *others* alone, in all 2,000 dollars; a pretty handsome sum this for doing right for one year. Query? what would this amount to, reckoning it an annuity of 2,000 dollars at 6 per. cent., compound interest, for thirty years. Ans. $158,116 37 cents.

The farmer who hires *laborers* to perform the work which ought to be executed by his *own sons*, may reasonably expect to die in *debt*, and leave a *thriftless* posterity to inherit a *small estate.*

The *truly wise*, who have acquired much knowledge, doubt *often*, and are *modest* in *opinion*: whilst the *very ignorant*, who have not attained knowledge enough to form *a hook* to hang *a doubt* on, are *hasty* and *presumptuous.*

Those who say "come boys," effect *much*, and do it *well;* while those who say "go boys," accomplish *little*, and that *badly.*

The best farmers are those who combine the most intelligence with the most practical industry, sound economy, and good taste.

The worst agriculturists are the ignorant and conceited, who mind every bodies business but their own.

A farmer who sells *hay*, should buy *manure*, otherwise, he will *soon* have his land *poor.*

R.

Palma Christi Bean.

The Southern Cultivator contains a communication from W. I. Anderson, of Marshall county, Tenn., on the culture and manufacture of the *Castor Bean*, from which we make the following extract:—It grows best in gently rolling beach and poplar land, and there is no crop I have ever noticed, that is so much improved by manure as the Palma Christi. It should be planted as early in March as the season will admit, as we do corn, in checks 6 by 8 feet distance in rich soil, allowing only one stalk at each check to remain standing. Three or six beans are planted in a hill to insure a good stand. In thin land so great a distance should not be given. It requires about the same culture as corn, and produces from 10 to 25 bushels per acre. I have heard from good authority that 50 bushels have been gathered from one acre. It begins to ripen the last of July, and continues to ripen and grow until frost. It is gathered by cutting the pods as they ripen, which are thrown on sleds drawn by horses. A yard is prepared, called a popping yard, made like one for drying brick. The firmest ground of course will be chosen; its size will be in proportion to the amount of land in cultivation, upon which the pods as they are taken from the stalk will be laid. A few days of sun will free the beans from their covering; the hulls are cleaned from them by a fan, such as are used for cleaning wheat.

For pressing the oil, I use wrought iron screws, stocked in the manner of stocking screws for pressing cotton.

I concur with you in the opinion that farmers might employ a portion of their grounds to good advantage in the culture of the bean, for the following reasons:

1st. It should be planted before it is proper to plant corn or cotton.

2nd. It could be worked before corn or cotton would need working.

3d. The gathering would be between the laying-by of corn and the picking-out of cotton; besides, it greatly improves the production of other crops that are planted after it. Whether it be the shading of the ground during the warmest part of summer, or the effect of a change of crop, I cannot tell, but the increase of the crops planted after the Palma Christi on my plantation, has been at least 25 per cent.

For the Farmers' Cabinet.

Decay of Peach Trees.

I have observed several communications in the Farmers' Cabinet, respecting the *decay* of *Peach Trees*. Several years' experience has satisfied me that the injury is occasioned by a fly depositing its eggs in the tree, and the larvæ after being hatched working at the root of the tree. My remedy is to remove the earth from about the trunk of the tree so as to form a basin, then pour a bucket full of boiling water around the tree—say in the ninth or tenth month. I have for the last ten years found this a complete remedy for both the *worm* and the *yellows*. I know an orchard of trees treated in this way each fall, all of which are thrifty at the present time—another lot, planted at the same period, but which did not receive the same treatment, soon perished.

B. H., An Ohio Farmer.

The Agriculturist's Note Book.

No. II.

Original and Selected.

LUCERNE.

The Rev. H. J. Close, in a communication to the Bath Agricultural Society, gives a very interesting account of the culture and produce of a small piece of lucerne, which to use his own words "shall have at least the merit of *exactness*, however unworthy in other respects." He says, April 30, sowed half a pound of lucerne in a seed-bed, the drills being drawn with a garden hoe, at six inches distance, and covered with a rake. September 24 following, took up the plants, cut the top roots off, leaving each root about three inches long, and transplanted them into a piece of good mixed soil land, containing two roods, sixteen rods, leaving room for ploughing the intervals, as it was planted two feet two inches from row to row, and ten inches from plant to plant, in the row. The *next season* it yielded *four crops*, which were cut and given to the horses in the yard, but as no account was kept the weight cannot be ascertained; but the next year it was all weighed, and a very accurate account kept of the produce, which was as follows:—

Crops.	Began Cutting.	Finished.	Produce lbs.
1st.	May 17.	May 25.	3,442
2d.	June 28.	July 15.	5,064
3d.	Aug. 2.	Aug. 14.	4,831
4th.	Sept. 7.	Sept. 14.	3,698
5th.	Cut and fed off		1,550*
	Total amount		18,585 lbs.

or eight tons six hundred and twenty-five pounds of green food from somewhat more than half an acre. At the time this account was furnished, May 17 of the following year, the lucerne, though the spring was backward, was two feet high.

[Lucerne, unless sown in drills and kept clean from weeds, will never answer to the

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* The fifth crop was not half of it cut, as the frost set in so early, but the part that was cut produced 775 pounds, and the part which was fed is set down at the same, making 1550.

farmer, but when judiciously managed nothing is more profitable.]

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PULVERIZE THE SOIL.

Few farmers are probably fully aware of the vast importance of keeping the earth well pulverized, and especially in seasons of drought. It has been observed by the celebrated Mr. TULL, and by many others since his time, that thoroughly pulverizing the soil, and reducing it to a perfect tilth, increases and extends the pasture of plants. The soil thus pulverized more readily attracts the moisture, always floating in the atmosphere. Mr. JOSEPH WIMPEY says, "I made several observations which clearly explain, to my own satisfaction, how dividing and pulverizing the soil becomes the proper mode of conveying the aliment prepared by nature for the sustenance of plants, into the bosom of the earth. One observation I will mention, as it is directly to the purpose. One evening, near the time of the men's leaving work, a smart shower of rain came on, which drove them off. They were digging one of the plots where beans had previously grown. The shower did not last more than half an hour. The next morning, as the men were digging, I observed that the rain had not penetrated above half an inch into the ground; I requested one of them to dig two or three spits of the ground that had been dug the day before, when it clearly appeared that the rain, in the new-dug ground, had gone as deep as the spade, which was full twelve inches." Here then, the readers of the Cabinet may see how, and by what means, the principles of vegetation are acquired, by keeping the land in thorough cultivation.

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CALCULATIONS OF THE WEIGHT PER BUSHEL, AND THE NUMBER OF GRAINS OF SUNDRY SEEDS, &C.

One acre of land, drilled at a foot distance on ridges of 8 feet 3 inches wide, contains in length 505,880 inches.

A bushel of wheat, weighing 62 pounds, contains 516,000 grains. Dropping one grain to an inch requires less than one bushel to an acre.

A bushel of barley, weighing 52 pounds, contains 515,000 grains.

A bushel of poplar or pig peas, weighing 64 pounds, contains 107,000 peas.

A bushel of horse beans, weighing 64 pounds, contains 35,000 beans.

A bushel of oats, weighing 32 pounds, contains 1,260,000 grains.

As all grains vary in size, the number contained in a bushel will be increased or diminished; but the above are the average numbers.

For the Farmers' Cabinet.

Broom Corn.

It is somewhat surprising that broom corn is not more extensively cultivated in this region of country. It is carried on on a great scale along the valley of the Connecticut, and to some extent in almost every part of New England. Its culture has been recently introduced into the District of Columbia, where, I learn a large factory for the manufacture of brooms is now in successful operation. The raising of broom corn in New England has been, and still is, a lucrative business; and I am apprized of no sufficient reason why it cannot become such in our own Pennsylvania. I find in an old number of the New York Farmer, a communication from that zealous and enlightened friend of agriculture, Rev. H. COLEMAN, of Mass., on its cultivation. He says "the seed is considered of about two-thirds of the value of oats, and mixed with corn, makes an excellent provender for the fattening of either swine or neat cattle. The return of seed is very precarious, but often abundant, reaching to 150 bushels per acre. The seed is planted in rows, wide enough apart for the cultivator to pass between them, and dropped in hills about eighteen inches from each other. Four or five stalks are considered sufficient to remain in a hill—more are sometimes allowed. The cultivation and manuring is more than for Indian corn. The stalks are not eaten by cattle, or even browsed by them. The cultivator considers five cents a pound a good price for his crop." From 10 to 1500 pounds of the brush are raised on an acre. P. D.

Buckingham, Feb. 1, 1839.

Note.—We have ordered a quantity of the seed of the broom corn, which may be obtained at the office of the Farmers' Cabinet.

Remedy for Burns.

To the Editor of the Farmers' Cabinet.

SIR,—The communication of a Philadelphia Physician (p. 199) is invaluable. The remedy can be depended upon, for it is based on true chemical principles. All sores, and particularly those arising from burns or scalds, are in a high state of oxydizement and acidity—soot contains abundance of alkali in its formation, and is strongly antisceptic, its chief ingredient being carbon—the two properties united, must, therefore, form the *neplus ultra* in time of need.

This recipe is far preferable to lime water, for although that has been found of great benefit, on account of its alkaline property, it is destitute of the antisceptic quality; and the same may be said of the saponaceous liniment made by mixing lime water with oil.

I once knew a child that had been dreadfully burned by falling into the fire; after be-

ing dressed with some kind of liniment, it was covered over with raw cotton; this formed a very easy bandage around the sores, and did not prevent the little sufferer from changing its position and using its limbs, and still it constituted a perfectly elastic bandage, and protection against the atmosphere. Would not raw cotton form an excellent covering, after the application of the soot and lard, or butter, as it could so easily be removed in small parcels, to permit fresh applications, and be replaced by little at a time, saving the sufferer much pain at the time of dressing, and the evil to be apprehended from long exposure to the external air.

The knowledge of so valuable a remedy for one of the most afflicting accidents to which we are liable, should be made as public as possible. To do my duty in this respect, I have transcribed it and affixed the paper to the door post of a large manufactory in which I am engaged, where it was read in a very short space of time by more than a hundred persons, and communicated by them to many more, before the day was over. Let every one "go and do likewise."

I consider the readers of the Cabinet much indebted to you, sir, for the insertion of so valuable a paper into your interesting work.

Philos.

For the Farmers' Cabinet.

Who sees Me?

"O wad some pow'r the giftie gie us
To see oursels as others see us!
It wad frae monie a blunder free us
And foolish notion."—*Burns.*

A respectable, worthy farmer lately stated, that he never went any where but what he learned something useful.

He said, that if he saw things wrong and in bad condition, it was an admonition to him to avoid errors and blunders of a similar description; and if he observed any thing that was an improvement on his own ways and plans, he adopted it; so that in either case he was instructed, and promoted his interests, either by the evil or the good he noticed in others. He stated, that on a particular occasion he was at a tavern, where there was an elderly man who was intoxicated, and a number of *ill-bred, vulgar young men* were engaged in deriding and scoffing at him; the inebriate, after some time of silence, turning round, observed to them; young men, "*what you find wrong in me, try to mend in yourselves.*" This remark, he said, made a lasting impression upon his mind, and had been very serviceable to him in his journey through life; and he thought, that if farmers generally would adopt the plan of *mending in their own practice, what they see wrong in the doings of others*, it would very soon effect a great and wholesome change in the agriculture of the country; greatly increase the number of blades of grass, and ears of corn, and make them longer too; and it would much promote the prosperity and independence of many families, who now consider *all times* as *bad times* with them. Remember,

The busy bee gathers honey from every flower.

Ezekiel.

Vegetable Cutters.

Friend Libby,—I have lately subscribed to the "Farmers' Cabinet," and have read parts of all the numbers from July 1836, to that of last month, and I now intrude upon the columns of this valuable agricultural assistant, to inquire of its readers, whether there is now in use any apparatus for cutting, with economy of time and labor, ruta baga, turneps, sugar beets, or other roots which are with us a common winter food for cattle. The common practice of throwing them into a mess box, and chopping them up with a spade or shovel, is not only laborious, but does not cut them in that regular manner which should be observed as a preventive of choking. The practice of steaming or boiling is becoming more general; but I am inclined to think that some machine which could be worked by a boy to *cut up* these valuable roots would be a great desideratum to the farming interest. I hope if any reader of the "Cabinet" has such a machine, or knows of any, he will give an account of it in the next number. I write in an uncouth style, but I hope I am understood. Could not the sugar beet rasp be in some way modified to answer the purpose?

Inquirer.

Burlington, N. J., 2nd mo., 9th, 1839.

There are a variety of *vegetable cutters* in use, particularly in New England, and "Inquirer," and all other friends, will be able in a short time, to supply themselves with vegetable cutters, and all other improved and useful implements in agriculture, at the new Agricultural Depository about being opened at No. 87 North Second-street.

For the Farmers' Cabinet.

Sugar Beet and Mangel Wurtzel.

If those about to cultivate either of these roots, would soak the seeds for twenty-four to forty-eight hours, and then roll them in plaster or fallen lime, they would become so completely coated as to resemble peas, and may be drilled, or planted by hand, with much less difficulty, and more certainty of success.

Beta.

The following communication was mislaid, or it would have appeared in the Cabinet for December.

For the Farmers' Cabinet.

Mr. Libby,—Sir, I observed in the last number of your highly appreciated production, an inquiry by "Public Good," "what is the best manner of constructing an ice house that will preserve ice from January to January." Mine is such an one—the construction of which is simple. The excavation is 15 by 13 feet, and 15 feet deep; the bottom, ends, and sides are lined with pine slabs, firmly spiked at top to the roof frame at an angle of about 70°; the roof inch boards. The embankment around it commences at some 8 or 10 feet distance, gradually raising to near the eaves, which are about 3 feet above the common level.

With the best wishes for your success in your laudable enterprise, I remain, sir, yours respectfully, I. T. S.

P. S. I would be much obliged by your very interesting correspondent from "New Garden," if he would inform the readers of the Cabinet, whether more than one conductor to a building is preferable. If the building is small, whether or not an addition of one or two points to the main conductor is desirable; and if so, at what distance should they be attached to it from the top.

Albern, Nov. 15, 1838.

Note.—Since writing the above, one of my men has just come from preparing my ice house to be refilled, and says there is a considerable quantity of ice in it yet. I put 27 wagon loads in last winter; it would have contained 8 or 10 more. Mr. P. G. will observe one of near the dimensions required, will contain about 35 wagon loads.

For the Farmers' Cabinet.

Weeds ought never to stand until they are in Flower.

"Were farmers at the trouble of collecting all sorts of weeds before they have formed their seeds."* To show how early plants perfect their seeds, and how much sooner this is effected than almost any imagine, we are told, that a person employed by a London florist to collect seeds on the banks of the White river, in Russia, sent home to his employer a beautiful *flower*, carefully packed in paper, regretting that he had been unable to find a specimen of the same plant sufficiently advanced to yield seed; when the flower came to hand, it still retained its beautiful hues, and to appearance, about as perfect as when plucked, but on examining the paper in which it had been packed; a few brown particles like dust were observed; these were sown, and produced perfectly formed plants of the flower which had been plucked in full bloom! Weeds ought never to stand until they are in flower. Eradicus.

* See Cabinet, p. 193, Vol. III.

For the Farmers' Cabinet.

Outlets for Cisterns.

Small matters sometimes defeat great designs.

There is an essay in each of the two last numbers of the Cabinet on the subject of building rain water cisterns; either of which no doubt will answer the purpose well, and it is hoped that before another year rolls round, those who are destitute of the means of furnishing water to their stock in their barn yards by other and better means, will resort to building of cisterns, either on the plans proposed or some other; the circumstance only of collecting the water which falls from the roof of a barn, instead of suffering it to deluge the yard, and carry off the best parts of the manure, would be productive of great gain. But there is a matter not noticed in the essays referred to, which should claim attention in building a cistern; and that is the constructing of a proper outlet from it, to discharge the superabundant water when it is full. Most cisterns have simply an opening through the wall at or near the top, for its exit, and the consequence is, that the water passes round the outside of the wall, and soaks down to the bottom and destroys the adhesion of the mortar, and finally makes its way through the wall, causing it to leak, and rendering it entirely useless. To remedy this a gutter should be constructed of such material as to carry the excess of water to some *distance* off, and not permit it to *soak* in around the wall; this is easily accomplished, and if properly done, and afterwards kept in order, it will be found that the cistern will remain sound for a much longer time. It is also very important to have a cistern closely and securely covered in, both with a view of keeping the water pure, and of preventing poultry and other small animals, from having their lives endangered from drowning.

A. B.

For the Farmers' Cabinet.

Eggs.

During the winter season when fowls can get no animal food, they lay but few eggs, but so soon as the frost comes out of the ground in the spring, and the worms begin to move from their winter quarters and show themselves, the hens find it out, and commence feeding on them; later in the season insects of various kinds are much sought after by them, and during the period that they can procure portions of animal food to mix with their other food, they continue to produce eggs; but no sooner are they unable to procure meat of some kind, than the number of eggs are diminished.

If, when eggs are plenty, proper measures were adopted for their preservation, they might be furnished at any season of the year,

in quantities to supply the demand at a reasonable price.

Fill an earthen or stone pot with fresh eggs; mix a quantity of fresh lime with water to the consistence of white-wash, and when cold, pour it upon them, so as to fill the pot; cover closely, and the eggs will keep sound and good for a year or more, without the lime-water being changed or renewed. Eggs put up in this way have been taken to Canton and brought back again in as sound a state as when they were first put up.

This is another, among the many instances of the wonderful preservative tendency of lime or lime water.

C.

For the Farmers' Cabinet.

Nest Eggs.

Since the suggestion in a former number of the Cabinet, of the advantages of artificial nest-eggs, a number of trials of them have been made, with complete success, the hens not appearing to regard the difference. Those that have been used, were turned out of some white wood, and a turner has succeeded so well in imitating the real thing out of white holly, that it would require a very sagacious hen to detect the difference. Some who have inspected them, think that R. M. Johnson, turner, No. 63 Walnut St. Philad., makes as fine, large, handsome eggs as can be produced by any biddy in the country.

Ova.

Hints for April.

During the present month, farmers should endeavor as much as possible to get their land into the best condition for planting, for on this will depend in a great measure the success of the crop.

No pains should be spared to apply manure copiously to corn and potatoe crops—the product will abundantly repay the labor. To the smaller grain crops, as for instance, oats and barley, manure should not commonly be applied, as the benefits in such cases may not overbalance the injury.

Wheat, which has been injured by the heaving of the frost, has in some cases been greatly benefitted by passing a roller over it, thus pressing the roots again into the earth.

New meadows should be rolled in the spring, to render the surface smooth for mowing

Plaster, to be beneficial to the greatest extent, should be sown on meadows early in spring.

Green sward, in order to be turned over neatly, should have the furrow slices one half wider than thick.

Seed barley, by being limed and rolled in plaster, has produced crops freer from smut in consequence of this operation, and yielded larger products.

The planting of locust trees for timber should be more attended to. The seeds when sown, should be previously scalded by pouring hot water on them and suffering it to stand several hours—the swollen ones should then be planted, and the others re-scalded.

Stocks of peach and other fruit trees, should now be cut and trimmed. Every bud should be removed except the one intended to grow.

The soil round fruit trees which do not stand in cultivated ground should be spaded for two or three feet on each side. This is absolutely necessary for young trees.

The roots of peach trees should be examined for the purpose of removing all the worms which may have eaten in the bark, and all the holes which appear should be searched to their termination, that the worm may not escape.

We wish again to urge upon farmers the great benefit to be derived from the culture of root crops—the amount of cattle food thus obtained is too much overlooked. By good culture, many hundred bushels may be safely calculated on, exceeding many times in value a good crop of hay from the same quantity of land. Drilling, instead of sowing the seed, greatly lessens the labor of hoeing.—*Gen. Far.*

Planting large and small Potatoes.

Considerable diversity of opinion exists among farmers in regard to planting potatoes, whether the seed, which is put into the ground, should be large or small, cut or uncut. Some are of opinion, that, in order to prevent the seed or variety from "running out," large potatoes should be used; others will contend that small pieces and small potatoes will afford as good a yield as the large ones, and that being the case, it is much more economical to use them. The late Dr. Parker, of Gardiner, once informed us, that he never had but one variety of potatoes in his life, and that he invariably planted one large sized tuber in the hill, and thereby prevented any deterioration of the crop. It would seem from theory that this would be the result, because the potato which is planted must of necessity afford nutriment to the young plant until its roots have become sufficiently large and extended to draw its support from the earth. The more nourishment there is on hand the greater the crop.

Accurate and careful experiment, however, does not establish this as an invariable result. The following statement from a friend in a private letter,—Mr. D. who is an excellent farmer in the eastern part of the state, and a close observer, does not seem to warrant the plan of using only the large potatoes for seed. "I have been," says he, "trying for five years

to prove that large potatoes are better than small ones, and have for that length of time kept two distinct breeds, selecting the largest of the one, and small ones of the other for seed each year, thinking that they would degenerate, but cannot yet perceive any difference. The small breed this year yielded as many and as large ones as the others."

"The potatoe crop with us has been this year a pretty profitable one, although we had so small a one; yet very well, as from an acre I got 260 bushels; of which I sold the merchantable, say about 200 bushels, for 70 cents per bushel."

After all, it would seem that much, if not the whole of the secret of obtaining a good crop, is the planting on a good soil and having a good season. The enormous yields that have been obtained the last year and the year before from the Rohan potato, is owing probably more to the good cultivation which was bestowed upon it, than to any thing so very superior in the potato itself. Our correspondent, H. Prince, Esq., of Thomaston, demonstrated, not long since, by actual experiment, that the Rohan has not yielded in the hands of others more than the Quoddy blues did in his. But what we were going to observe was this—the Rohans, in every instance that we have seen, were cut, and each eye planted by itself.—*Maine Farmer.*

On Grafting.

WAX FOR GRAFTING.

Prepare your wax by melting seven parts of rosin, two of beeswax, and one of tallow together. Pour this when melted into cold water, say a pound at a time, and having rubbed your hands thoroughly with lard, press and work the wax in your hands till it is pliable, and the water forced out, it is then ready for use. Wax prepared in the above manner will remain on the trees three years and protect the stumps from the weather. If a larger proportion of beeswax or tallow are used, although the scions will grow, the wax will soon wash off and not protect the stump a sufficient length of time. The wax when used must be sufficiently warm to spread easily. I always spread it with my fingers, having first rubbed them with lard to prevent the wax from adhering to them. I cover the top of the stump, and the split on both sides as far as it extends; the wax on the top of the stump should be the thickness of a cent, it may be somewhat thinner on the sides. Great care should be used to make the cleft both air and water tight, and if once made so with the wax, it will remain tight through the year.

The time for grafting will depend much on the forwardness of the season. I think the best time is when the buds first begin to open. Scions will live set any time after the sap begins freely to circulate, and till the apples on the trees are as large as musket balls, yet those set late, not having the advantage of the whole season, will not grow as much the first year.

PRUNING THE TREES.

When small trees are grafted the whole top may safely be removed at once; but I think it bad policy to remove more than one-third of the top of a large tree in one year. There will usually be enough of the top of a large tree cut away the first year by grafting; let half the remainder be cut away the following year, and the third year finish the pruning. The young sprouts should all be taken off yearly, especially those near the young scions.

Premiums offered by the Pennsylvania Horticultural Society.

Mr. Editor—It may be interesting to the readers of the Farmers' Cabinet, and at the same time promote the objects, which the Pennsylvania Horticultural Society have in view by publishing in your widely circulated journal, the following extracts from the premium list for this year.

STANDING PREMIUMS

AWARDED AT EACH STATED MEETING.

For the best bouquet, a premium of two dollars.

For the most interesting collection of plants, in pots, a premium of two dollars.

For the most interesting display of vegetables, a premium of two dollars.

For the best specimen of fruit, a premium of two dollars.

All articles intended for competition at the monthly meetings must be deposited an hour before the usual time of meeting, and will be returned to the contributors, unless otherwise ordered.

The committees have discretionary power of withholding premiums if the articles exhibited do not merit them.

The monthly meetings of the Society are held under the Athenæum, west side of Fifth, south of Chestnut st., in the third Saturday of every month.

Description of a Good Cow.

She's long in her face, she's fine in her horn,
She'll quickly get fat without cake or corn;
She's clear in her jaws, and full in her chine,
She's heavy in flank, and wide in her loin.

She's broad in her ribs, and long in her rump,
A straight and flat back, with never a hump;
She's wide in her hips, and calm in her eyes,
She's wide in her shoulders, and thin in her thighs.

She's light in her neck, and small in her tail,*
She's wide in the breast, and good in the pail;
She's fine in her bone, and silky in skin,
She's a grazier's without, and a butcher's within.

* This epithet alludes to the lower part of the tail only, the higher part ought to be broad, according to the former description.

Removal.

The Office of the Farmers' Cabinet is removed from No. 45 North Sixth street, to the New AGRICULTURAL WAREHOUSE, No. 87 North Second street, above Arch st.

Agricultural Depository,

NO. 87 NORTH SECOND ST., PHILADELAHIA.

The subscriber is now receiving a general assortment of implements and machinery used in agriculture, horticulture, and rural economy, choice seeds, &c., to which the attention of persons engaged in agriculture and horticulture is most respectfully solicited.

JOHN LIBBY.

Elements of Agricultural Chemistry, in a Course of Lectures by Sir Humphrey Davy.

This work, so highly important to the intelligent agriculturist, has been republished by the editor of the Farmers' Register, Petersburg, Va. Every intelligent farmer should possess a copy of this work. We know not where it may be obtained in this city, but we shall take measures to obtain a supply for those of our friends who may wish to avail themselves of so valuable an assistant.

☞A number of the PHILADELPHIA REPORTER will be sent to each of the subscribers to the Farmers' Cabinet, without charge, save the postage, on those sent by mail. The Reporter will contain a catalogue of the Agricultural Implements, &c. for sale at the new Agricultural Depository, 87 North Second street.

The first and second volumes of the Farmers' Cabinet may be obtained at the office.

Dr. J. F. CALLAN, Washington City, is agent for the Cabinet. Post Masters, and gentlemen friendly to the work are respectfully requested to use their influence in extending its circulation.

Quantity of rain which has fallen in each month since January 1, 1839.

	Inches.
1st month,	5.03
2d month,	3.42

Philadelphia Hospital, 2d mo., 1st, 1839.

Bound Volumes of Farmers' Cabinet.

The third edition of the first volume of the Farmers' Cabinet is now ready. Gentlemen who wish the first or second volumes, or both, can be accommodated. The volumes may be sent in flexible covers to any part of the United States, by mail. They may also be obtained at the office, or of our agents, neatly bound, at one dollar and a quarter per volume.

Prices Current—March 13.

FLOUR, PER BARREL.	
Pennsylvania and Brandywine	$7 50 a 7 75
Western	7 50 a 7 62
Scraped	0 00 a 0 00
Middling	5 00 a 0 00
Rye Flour	5 25 a 0 00
Corn Meal	3 62 a 3 87
Buckwheat Meal. per cwt	2 25 a 2 75
GRAIN, PER BUSHEL.	
Wheat, Pennsylvania	$1 70 a 1 75
—— Southern	1 60 a 1 62
Rye, Penna	1 12 a 1 15
—— Southern	1 10 a 1 12
Corn, Penna. round yellow,	90 a 91
—— Southern, yellow	80 a 90
—— White	84 a 84
Oats, Penna	45 a 46
—— Southern	43 a 44
Barley, Eastern	1 12 a 1 15
—— Penna	0 00 a 0 00
Peas	1 75 a 2 00
Beans, white	1 75 a 1 88
PROVISIONS.	
Beef, mess	$14 00 a 00 00
—— prime	10 00 a 10 50
Pork, mess	21 50 a 22 50
—— prime	18 00 a 18 50
Bacon, western, per lb	11 a 00
Hams, Jersey	14 a 15
—— Western	12 a 14
Butter, extra keg, No. 1	15 a 16
Cheese, country	8½ a 9½
Lard, western	12 a 12½
Philadelphia	12 a 13
Jersey	13 a 13½
WOOL, PER POUND.	
Prime Saxony	55 a 00
American full blood	50 a 55
——— ¾ blood	45 a 49
——— ½ blood	40 a 43
——— ¼ blood and common	35 a 37
Lamb's sup. pull	47 a 50
Do. Nos. 1, 2, and 3	33 a 45
Hay, Timothy, per 100 lbs	85 a 1 00
Clover	75 a 90
Hops, per lb. 1838, prime	18 a 20
Clover Seed, per bushel (best Penna.)	13 00 a 13 50
——— —— Foreign	12 00 a 13 00
Flax Seed, rough	1 87 a 1 90
Timothy Seed (best)	3 00 a 4 00
——— —— New York or western Penna.	2 25 a 3 00
Herd Grass, or Red Top	0 70 a 0 80
Orchard Grass	2 00 a 2 50
Sumac, American, per ton	35 00 a 37 50
Tallow, American, per lb	11 a 11½
NEW YORK—March 12.	
Flour, per barrel	$7 50 a 8 00
Wheat, per bushel	1 75 a 1 80
Corn, per bushel	90 a 94
Rye, per bushel	1 00 a 1 03
Oats per bushel,	45 a 50

THE FARMERS' CABINET,

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Vol. III.—

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